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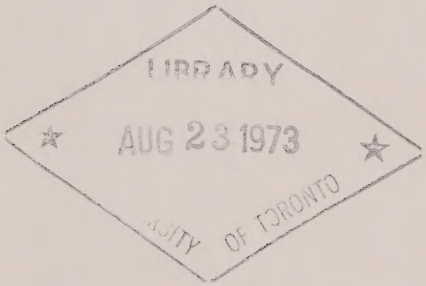
Ontario Ministry of Labour,
The Honourable Fern Guindon,
Minister
R. D. Johnston, Deputy Minister

Research Branch
May 1973

Industry-Sponsored Training Programmes in Ontario August, 1968 - July, 1969



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Prepared by
Michel D. Lagace

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FOREWORD

This report explores the extent of formal training done by private employers in Ontario and the characteristics of establishments that undertake formal training programmes. The study is based on a survey of training done in industry during the twelve-month period ending July 31, 1969. The material gathered was used as background information for a major review of the Province's programmes supporting training-in-industry. It is being released because it should be of interest to anyone concerned with industrial training and government's support of it.

The report was prepared by Michel Lagace under the guidance of Frank Whittingham. Other staff members of the Ministry's Research Branch assisted with developing and carrying out the survey, and preparing the report.

John Kinley,
Director,
Research Branch.

INTRODUCTION

In recent years, governments have greatly expanded their training activities. The fear of structural unemployment in the early 1960's, the desire to reduce poverty, to dampen regional disparities in employment and earnings, and to alleviate inflationary pressures have focussed attention on training. Since industry has historically been the main supplier of training in specific skills, governments, both in Europe and in North America, have turned to industry as one of the agents for skill development. If government is to support training in industry, several questions arise. First, what is the present capacity of private industry to provide training? What kinds of training programmes should government support and which firms should it encourage to provide these training programmes?

In response to the need for information which would shed some light on these questions, the Research Branch of the Ontario Ministry of Labour undertook a special survey of the training activities of employers during the period from August 1, 1968 to July 31, 1969. The purpose of the survey was to identify the volume and type of training that Ontario Industry was providing to its employees and to determine the characteristics of establishments with formal training programmes. The results of the survey are presented in this report and their implications for the role of government in training in industry are discussed.

The survey sought information on all types of training in industry. However, a distinction was made, both in the survey questionnaire and in this report, between apprenticeship training and all other kinds of formal training programmes. This distinction was made, in part, so that employers could relate their training activities to the questionnaire. Moreover, the distinction reflects the fact that governments have established separate programmes to encourage apprenticeship and other forms of training. While apprenticeship has been viewed as a long-term training programme aimed at developing highly skilled workers, other training in industry programmes have usually involved short-term skill development courses aimed at assisting workers to adapt to technological change or to acquire or upgrade skills required to gain or retain employment. While this distinction between apprenticeship and other kinds of formal training suggests that a major characteristic of training is its duration (and, implicitly, the level of skill attained), it should be noted that the difference between the two types is not always evident in practice. Thus, some "short-term" training in industry may be of longer duration than some apprenticeship programmes.

Although some data on apprenticeship training are presented in this report, the main focus is on "short-term" training.

Organization of the Report

In the next section of this introductory Chapter, the survey of industry-sponsored training programmes is described. The definitions used, the reference period, the industries covered by the survey and the industrial classification of establishments are discussed.

The second Chapter presents an overview of the survey results. This overview covers both short-term and apprenticeship training programmes. Chapter III of the report focusses on short-term training and excludes apprenticeship. It examines information on the industries which reported short-term training programmes and on the type and volume of training they provided. The occupation of the trainees, the length of the courses reported by respondents and the method of instruction (i.e., on-the-job or in a classroom) are discussed. The implications of the survey results for government support of training in industry are discussed in Chapter IV. The report concludes with a summary of the survey findings.

Scope of the Survey

Definitions: In order to arrive at some measure of the volume of training provided by industry, training had to be defined in such a way that the respondent could identify it readily. Moreover, training had to be reported on a standard and uniform basis by different establishments and industries. These considerations led to a definition of training which restricted the scope of the survey to formal training programmes.

For purposes of the survey, formal training was defined as any pre-arranged and structured system of instruction sponsored or utilized by an establishment to qualify employees to perform, or to improve their skills in performing their job duties. The training might be of any length and involve any number of full or part-time workers. This definition of formal training included 'on-the-job', 'classroom', safety, orientation and apprenticeship training. In this report, short-term training includes all these types of training except apprenticeship.

Informal training was excluded from the scope of the survey. To guide employers in completing the questionnaire, this type of training was defined as a process in which employees 'pick up' the knowledge needed to perform a job by working under normal work or production conditions either with an experienced worker or under the direction of a supervisor or foreman. Informal training differs from formal training in that it does not involve a pre-arranged and structured system of instruction.

Although it is fully recognized that industry provides a large part of its training through informal on-the-job instruction, and that formal training programmes may include some informal training, there were several reasons for excluding it from the scope of the survey. Most employees entering a new job receive some form of training.[1] This training may be communicated orally or through demonstration by an experienced worker, foreman or supervisor.[2] The skills required for the job are learned through practice and repetition. Furthermore, many aspects of the job are self-taught. These characteristics of informal training suggest that this process of learning to perform a job often lacks a well-defined structure and that, while informal training occurs frequently, its measurement would be very difficult.

Coverage of the survey: The list of establishments covered by the survey was obtained from the Unemployment Insurance Commission. The list was restricted to establishments with fifteen or more insurable employees in Ontario and all industries except construction, public administration and defense were included. However, data provided by respondents in the agriculture (e.g., experimental and university farms), forestry, fishing and trapping industries are excluded from this report because of the small number of employees and trainees in these industries.[3]

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1 The prevalence of informal on-the-job training has been noted in numerous studies. See, for example, Canada Department of Labour, Acquisition of Skills, Report No 4 (Ottawa: Queen's Printer), 1960, p. 13; Ida R. Hoos, Retraining the Work Force: An Analysis of Current Experience (Berkeley: University of California Press), 1967; Marvin J. Levine, "Training and Retraining in American Industry," Labor Law Journal (October 1964), pp. 634-648.

2 For a discussion of informal on-the-job training, see United States Department of Labor, Work Force Adjustments in Private Industry – Their Implications for Manpower Policy, Manpower/Automation Research Monograph No. 7 (October 1968), pp. 95-115.

3 Family owned and operated farms would not appear on the list of establishments if the farm had no insurable employees. Statistics Canada reported 9,605 employees in the forestry industry in July, 1969, compared to 8,516 in the Ontario survey. Few establishments reported a formal training programme. See Statistics Canada, Employment and Average Weekly Wages and Salaries, Cat. No. 72-002, August, 1969. Data refer to the last pay period in July.

Response to the survey: Of the 11,221 questionnaires mailed to establishments having 15 or more employees in Ontario, 6,942 or 61.2 per cent were returned. In addition, some of the respondents reported for other establishments as well as for themselves (e.g., a Head Office reporting for all its branches in Ontario). Taking these reports into account, replies were received from 68.1 per cent of the establishments on the survey list.

Although no attempt was made to estimate the volume of training in establishments which did not respond to the questionnaire, data were obtained from non-respondents to determine whether they differed from the respondents. Since previous surveys on training-in-industry have shown that large firms are more likely than small ones to have a training programme, a sample of non-respondents was contacted by telephone to obtain the number of workers they employed. The distribution of non-respondents by size was compared to that of the respondents and the data are presented in Appendix A. In general, larger establishments constituted a higher proportion of the non-respondents than of the respondents; this pattern was common to all industries. Thus, the estimates of the extent of formal training reported in this study probably understate the volume of training in industry. Given the high proportion of establishments that returned the questionnaire, however, the patterns which emerge in this study (e.g., inter-industry differences in the proportion of establishments with formal training programmes and the types of training provided by private employers) should reflect patterns which prevail in industry generally.

Industrial classification: The industrial classification used in the survey was taken from the Standard Industrial Classification Manual published by Statistics Canada in 1960. In that publication, an industry is defined as a group of operating units (e.g., companies or establishments) engaged in the same or a similar kind of economic activity. These units are classified into eleven divisions: agriculture; forestry; fishing and trapping; mines, quarries and oil wells; manufacturing; construction; transportation, communication and other utilities; trade; finance, insurance and real estate; community, business and personal services; and public administration and defence. In this report, the names of several divisions have been abbreviated for convenience; for example, references to the transportation industry include all companies or establishments in the transportation, communication and other utilities division. As noted earlier, the agriculture, forestry, fishing and trapping, construction and public administration and defense industries are excluded from this report.

CHAPTER II
FORMAL TRAINING PROGRAMMES IN INDUSTRY

This part of the report gives an overview of the survey of industry-sponsored training programmes in Ontario. It refers to both short-term and apprenticeship training programmes. After a brief examination of the volume of training in industry, data are presented on the organization of formal training programmes and on recruitment patterns.

Volume of Formal Training in Industry

Two measures of the volume of formal training in industry are used in this section. One is the proportion of establishments that reported formal training programmes during the reference year; the other is the proportion of employees who were enrolled in such programmes.

Establishments with formal training programmes

Table 1 reveals that 21.8 per cent of establishments with 15 or more employees reported at least one formal training programme.[4] The proportion was approximately one-fourth in each industry except service where it was 10.3 per cent.[5]

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[4] It should be noted that an establishment is counted only once regardless of the number of training programmes it reported; an establishment reporting both short-term and apprenticeship training programmes is also counted only once.

[5] Two Canadian and one United States surveys of training in industry have been undertaken in recent years. Comparison of the results of these surveys with the Ontario survey are difficult because of differences in occupational and industrial coverage as well as differences in the size of establishments surveyed. In addition, different industrial classifications have been used. See Statistics Canada, Organized In-Service Training in Four Major Industries (Ottawa: Queen's Printer), 1965; and Organized Training in Four Industry Groups (Ottawa: Queen's Printer), 1967. For the U.S. survey, see U.S. Department of Labor, Training of Workers in American Industry – Report of a Nationwide Survey of Training Programs in Industry, 1962, Manpower Administration, Bureau of Apprenticeship and Training, U.S. Government Printing Office, 1965.

Table 1

Percentage of Establishments Reporting Formal Training Programmes, by Industry and Size of Establishment, Ontario, August 1, 1968 – July 31, 1969

Industry	Size of Establishment (Employees)						
	Total[b]	15-49	50-99	100-249	250-499	500-999	1,000 and over
Total	21.8	16.0	22.7	25.9	36.8	49.0	50.8
Mines, Quarries and Oil Wells	27.0	8.1	15.4	15.8	–	61.3[a]	
Manufacturing	23.5	14.8	21.8	26.8	41.8	57.3	64.7
Transportation, Communication and Other Utilities	26.5	17.2	34.7	37.0	–	47.4[a]	
Trade	26.1	23.9	30.9	27.7		35.4[a]	
Finance, Insurance and Real Estate	24.7	11.4	23.4	34.1		37.7[a]	
Community, Business and Personal Services	10.3	8.7	10.1	15.1	–	17.3[a]	–

(a) Establishments with 250 or more employees were aggregated because the number of establishments in each size category was small.

(b) Excludes establishments of fewer than 15 employees.

A large number of the establishments with formal training programmes were involved in apprenticeship (see Table 2). While 21.8 per cent of all establishments reported a formal training programme, 16.4 per cent reported apprenticeship training.[6] The latter proportion was about one-fifth in all except the service industry, where it fell to 6.3 per cent, and the finance industry, where apprenticeship was negligible.

Regardless of the proportion of establishments reporting formal training programmes, all industries followed the same pattern with respect to the incidence of training by size of establishment: the larger the employment size category, the greater was the proportion of establishments reporting formal training programmes. Only 16.0 per cent of the establishments with fifteen to forty-nine employees reported formal training programmes; this proportion increased in each size group and reached 50.8 per cent of the establishments employing 1,000 persons or more.

Several factors may contribute to the positive relationship between establishment size and the proportion reporting formal training programmes. If, among smaller establishments, each employer is small relative to the labour market in which he seeks workers, he can presumably expect to meet his requirements by hiring workers from other establishments. Conversely, the probability that other employers will "pirate" trained workers might discourage training as a means of adjusting to labour shortages in small firms.[7]

On the other hand, in large establishments, because of the greater number of skilled workers required, the employer may not expect to satisfy all his needs through recruitment. If the establishment employs a large proportion of the workers in a particular labour market, the threat of pirating may be less significant than among small establishments. Larger employers also tend to provide levels of fringe benefits, seniority rights and prospects of employment stability that all tend to reduce turnover. Lower turnover would, in turn, enable the employer to capture at least part of the return from an investment in training. Furthermore, if larger establishments produce long runs of standardized products,

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6 As noted in Chapter III, 9.1 per cent of the establishments reported a short-term formal training programme, implying that 3.7 per cent of the establishments had both apprenticeship and short-term training programmes.

7 This fear of pirating may not be an effective deterrent to training to the extent that the establishment must train in order to maintain production.

Table 2

Percentage of Establishments Reporting Apprenticeship Training Programmes, by Industry and Size of Establishment, Ontario, August 1, 1968 – July 31, 1969

Industry	Size of Establishment (Employees)						
	Total	15-49	50-99	100-249	250-499	500-999	1,000 and over
Total[a]	16.4	12.5	16.9	18.3	26.1	40.8	33.1
Mines, Quarries and Oil Wells	22.0	2.7	15.4	15.8	–	51.6[b]	–
Manufacturing	18.2	12.6	15.6	19.7	30.3	51.0	51.0
Transportation, Communication and Other Utilities	20.5	11.2	30.5	29.6	–	39.5[b]	–
Trade	21.5	20.1	26.7	20.9	-	18.8[b]	-
Community, Business and Personal Services	6.3	5.1	5.5	9.6	-	12.2[b]	

(a) The finance, insurance and real estate industry is excluded from this Table because of the negligible amount of apprenticeship training it reported.

(b) Establishments with 250 or more employees were aggregated because the number of establishments in each size category was small.

workers would probably tend to become more narrowly specialized than in small establishments. This would reduce the degree to which their skills are transferrable to other establishments, lower turnover rates and induce the employer to invest in training.

Economies of scale realized by providing training to a large number of workers would further increase the probability of finding formal training programmes in larger establishments. Thus, a larger firm might find the cost per trainee in a given type of training programme to be lower than a smaller establishment wishing to provide the same type of training to fewer workers. In part, this differential in cost per trainee could arise from the lack of "divisibility" of certain costs, (e.g., overhead costs, equipment, instructors, etc.). Although these considerations are somewhat speculative, they suggest some of the factors that may underlie the positive relationship between the size of establishment and the incidence of formal training programmes.

Employees in Training

While the proportion of establishments with formal training programmes serves as a rough measure of training activity in each industry or size category, it does not directly indicate the extent to which employees participate in the training programmes provided by these establishments. A more direct measure of the volume of training is the number of employees enrolled in training programmes as a proportion of all employees in the establishment. For all industries surveyed, 10.4 per cent of the employees received some type of formal training during the twelve-month reference period (see Table 3). Short-term formal training was more widely used than apprenticeship: 6.9 per cent of all employees were enrolled in short-term programmes but only 0.8 per cent were apprentices. An additional 2.7 per cent of the employees were enrolled in safety and orientation programmes. Thus, while more establishments reported apprenticeship than other types of formal training, it accounted for a much lower proportion of employees. The distribution of trainees in short-term formal training programmes is set out in detail in Chapter III of this report.

The Organization of Training

To gain some insight into the organization of training in industry, respondents were asked to indicate whether they employed one or more

Table 3

Percentage of Employees in Formal Training Programmes, by Type of Training, Ontario, August 1, 1968 – July 31, 1969.

Type of Formal Training	Percentage of Employees in Training (a)
Total	10.4
Apprenticeship	0.8
Short-Term Training (excluding safety and orientation)	6.9
Safety and Orientation Training	2.7

(a) These percentages were calculated by dividing the number of employees in training at any time during the reference year by the total number of employees as of July 31, 1969.

persons whose full-time job is to organize or direct formal training programmes. In a very general way, this information may indicate whether training was a continuing activity which required full-time attention or whether it constituted only part of an employee's job, perhaps because training was provided infrequently or because the volume of training activity did not require a full-time administrator.

Only 14.0 per cent of the establishments with training programmes reported a full-time person in charge of training, and this proportion fluctuated widely between industries (see Table 4). It was highest in the mining and finance industries (53.8 per cent and 23.3 per cent respectively); manufacturing reported the lowest percentage (9.9 per cent).

As expected, the proportion of training establishments reporting a training officer increased directly with the size of the establishment (see Table 5). While only 10.8 per cent of the establishments with 100 to 249 employees reported having a full-time person in charge of training, the proportion rises to 56.4 per cent among establishments with 1,000 or more employees. Thus, even among large establishments, a substantial proportion of employers have assigned the responsibility for training to officials whose job includes duties other than those pertaining to training.

Recruitment Patterns

Several courses of action can be taken by establishments seeking employees in a given occupation. If they turn to workers outside the establishment, they can recruit persons with the required skills or they can hire persons with little or no skill and train them. If they choose persons already employed in the establishment, they can select those with related experience and train them in those aspects of the new job with which they are not familiar. This training may involve a short period of on-the-job informal training conducted by an experienced worker or supervisor, or it may require a formal training programme.

An understanding of the recruitment patterns adopted by establishments is directly related to the concepts of internal and external labour markets. The internal market has been defined as "an administrative unit

Table 4

Organization of Formal Training Programmes, by Industry, Ontario, July 1969

Industry	Percentage of Training Establishments With		
	Total	At Least One Full-Time Training Officer	No Full-Time Training Officer
Total	100.0	14.0	86.0
Mines, Quarries and Oil Wells	100.0	53.8	46.2
Manufacturing	100.0	9.9	90.1
Transportation, Communication and Other Utilities	100.0	13.7	86.3
Trade	100.0	15.0	85.0
Finance, Insurance and Real Estate	100.0	23.3	76.7
Community, Business and Personal Services	100.0	14.0	86.0

Table 5

Organization of Formal Training Programmes, by Size of Establishment, Ontario, July 1969

Size of Establishment (Employees)	Percentage of Establishments With		
	Total	At Least One Full-Time Training Officer	No Full-Time Training Officer
Total	100.0	14.0	86.0
15-49	100.0	8.1	91.9
50-99	100.0	4.0	96.0
100-249	100.0	10.8	89.2
250-499	100.0	21.8	78.2
500-999	100.0	33.3	66.7
1,000 and Over	100.0	56.4	43.6

within which labour is allocated by institutional rules."[8] The concept is based on a distinction, made both by employers and employees, between the employment rights and opportunities of the workers within the administrative unit and those accorded to people outside that unit. Examples of institutional rules that shape internal labour markets are promotion and seniority systems. These rules serve to allocate labour within the unit by defining the sequence of jobs through which workers progress and the training required to perform those jobs.

The internal labour market is linked to the external market through "ports of entry". These are jobs for which employers seek workers outside the administrative unit. Although a conceptual distinction can be drawn between jobs which are filled through promotion and training and those which are ports of entry, hiring and promotion systems vary markedly between establishments and between submarkets in the same establishment. At one extreme, some jobs may be filled only by workers with experience inside the unit after they have progressed through a number of jobs; such jobs are largely insulated from the external labour market. At the other extreme, jobs may be filled by workers from outside the unit and offer few opportunities for upward mobility to new entrants. A mixture of these two systems is also possible. For example, low-skilled jobs may be entry points which lead to semi-skilled production jobs, while the external labour market is used to hire skilled maintenance and craft workers.

Although the survey of industry-sponsored training programmes was not intended to analyze the factors which determine the hiring, promotion and training practices of employers, the data from the survey shed some light on their recruitment patterns. Employers were asked to rank four sources of workers who entered jobs in their establishment during the twelve-month period ending July 31, 1969. In Tables 6 to 8, the source reported to be most important to employers is ranked according to the number of times it was mentioned; the source used most often by employers received a rank of one and the source mentioned least often, a rank of four.

The data suggest that employers rely primarily on institutional training not sponsored by them and on informal training to meet their skill requirements. Hiring persons from outside the establishment without giving them formal training was the most important source of workers

[8] Peter B. Doeringer, "The Internal Labor Market and Internal Training", Work Force Adjustments in Private Industry — Their Implications for Manpower Policy, Manpower Administration, United States Department of Labor, Research Monograph No. 7, p. 9.

Table 6

Source of Employees Who Entered Their Job Between August 1, 1968 and July 31, 1969 and Who Did or Did Not Receive Formal Training From Their Employer, by Occupation and Rank,[a] Ontario

Occupation	Source and Rank			
	Outside Establishment with No Formal Training	Within Establishment with No Formal Training	Within Establishment with Formal Training	Outside Establishment with Formal Training
Total	1	2	3	4
Managerial and Executive	1	2	3	4
Professional	1	2	4	3
Technical	1	2	4	3
Supervisory and Foreman	2	1	3	4
Clerical	1	2	4	3
Sales	1	2	4	3
Service	1	2	4	3
Craftsmen and Production Process Workers[b]	1	2	3	3
Other	1	2	4	3

(a) The source assigned the rank of one was mentioned most often by respondents as the most important source of workers. The source receiving a rank of four was mentioned least often.

(b) For this occupation, recruitment of workers from within and outside the establishment and provision of formal training were mentioned equally often by employers.

Table 7

Source of Employees Who Entered Their Job Between August 1, 1968 and July 31, 1969 and Who Did or Did Not Receive Formal Training From Their Employer by Industry and Rank,(a) Ontario

Industry	Source and Rank			
	Outside Establishment with No Formal Training	Within Establishment with No Formal Training	Within Establishment with Formal Training	Outside Establishment with Formal Training
Total	1	2	3	4
Mines, Quarries and Oil Wells	1	2	3	4
Manufacturing	1	2	3	4
Transportation, Communication and Other Utilities	1	2	4	3
Trade	1	2	4	3
Finance, Insurance and Real Estate	1	2	3	4
Community, Business and Personal Services	1	2	4	3

(a) The source assigned the rank of one was mentioned most often as the most important source of workers. The source receiving a rank of four was mentioned least often.

Table 8

Source of Employees Who Entered Their Job Between August 1, 1968 and July 31, 1969 and Who Did or Did Not Receive Formal Training From Their Employer, by Size of Establishment and Rank,(a) Ontario

Size of Establishment (Employees)	Source and Rank			
	Outside Establishment with No Formal Training	Within Establishment with No Formal Training	Within Establishment with Formal Training	Outside Establishment with Formal Training
Total	1	2	3	4
15-49	1	2	4	3
50-99	1	2	4	3
100-249	1	2	3	4
250-499	1	2	3	4
500-999	1	2	3	4
1,000 and Over	1	2	3	4

(a) The source assigned the rank of one was mentioned most often as the most important source of workers. The source receiving a rank of four was mentioned least often.

who entered jobs during the twelve-month reference period (see Table 6). This was followed by the practice of placing workers already employed in the establishment in new occupations, again without providing formal training. The third most frequently used approach to filling job vacancies was to recruit workers internally and to provide them with a formal training programme. The approach mentioned least often by employers was to hire workers from outside the establishment and to train them in a formal programme.

There were few variations to these patterns between occupational groups. For supervisors and foremen, it was more common to recruit workers within the establishment than it was to hire them from outside. This practice may reflect the need for workers in this category to know the operations of the establishment, plant layout, company policy and procedures, and may also be related to the expectations of employees. The need for management to know the worker's ability to supervise and to get along with other workers would also tend to encourage the use of internal sources for supervisory jobs.

While recruiting internally and training workers in formal programmes was the third most frequently mentioned method of filling job vacancies, exceptions occur in several occupations. In the professional, technical, clerical, sales and service occupations, it was more common to recruit workers externally and to train them formally than it was to train existing employees for different jobs within the establishment. In some of these occupations, particularly the professional, technical and clerical categories, the explanation for this practice may be that new entrants in these occupations usually require some form of institutional training (e.g., in universities, business and commercial schools), and they may require additional training in the establishment to acquaint them with the products or materials involved in the employer's operations or with the company's policies and procedures. In the sales and service categories, employers may have to recruit outside workers because of expanding operations or high turnover rates.

Although the occupational composition of the work force in an industry or establishment size category may influence its patterns of recruitment and training, the data in Tables 7 and 8 indicate few deviations from the overall pattern. In all industries and size categories, the use of external and internal hiring without providing formal training were the two most important recruitment patterns. Deviations from the overall pattern occurred in the transportation, trade and service industries and among establishments with fewer than one hundred employees. In these categories, hiring outside the establishment and training the new employees was more common than internal recruitment coupled with formal training.

The uniformity of hiring and training practices revealed by the survey data is somewhat surprising. Many factors might give rise to diversity in these practices, including differences in the occupational composition of industries and establishments, personnel policies and economic conditions that may influence recruitment and training. However, analysis of the causes of the apparent uniformity is beyond the scope of this study.

CHAPTER III

SHORT-TERM FORMAL TRAINING PROGRAMMES IN INDUSTRY

This part of the report contains a review of short-term formal training programmes in Ontario. This review forms the basis of a discussion of government involvement in training in industry in the next Chapter. As noted earlier, short-term training is defined to include all formal training programmes except apprenticeship. Data on the volume, type and duration of training programmes and on methods of instruction (i.e., on-the-job and in classrooms) are presented.

Volume of Short-Term Training

In this section, the two measures of the volume of training used in the preceding Chapter are applied to short-term training programmes. These measures are the proportion of establishments reporting formal training programmes and the proportion of employees enrolled in these programmes.

Establishments with Short-Term Training Programmes

When apprenticeship training is excluded from the data, the proportion of establishments reporting formal training programmes falls from 21.8 per cent to 9.1 per cent (see Table 9). The proportion of establishments with a short-term training programme was highest in the finance industry (21.5 per cent). It was followed by mining (14.0 per cent) and transportation (12.4 per cent). The proportion in the manufacturing and trade industries was close to the overall average; it was lowest in the service industry (4.7 per cent).

The proportion of establishments reporting short-term training programmes increased directly with establishment size. It ranged from 5.6 per cent among establishments with fifteen to forty-nine employees to 36.4 per cent among establishments with one thousand or more employees.

Employees in Training

While the percentage of establishments with a formal training programme is a convenient measure of the volume of training, it does not

Table 9

Percentage of Establishments Reporting Formal Short-Term Training Programmes, (Excluding Apprenticeship) by Industry and Size of Establishment, Ontario, August 1, 1968 – July 31, 1969

Industry	Size of Establishment (Employees)						
	Total	15-49	50-99	100-249	250-499	500-999	1,000 and over
Total	9.1	5.6	9.8	11.6	17.0	19.7	36.4
Mines, Quarries and Oil Wells	14.0	5.4	–	5.3	–	35.5[a]	–
Manufacturing	9.6	4.5	10.2	12.1	16.8	19.8	37.3
Transportation, Communication and Other Utilities	12.4	8.2	15.8	14.8	–	26.3[a]	-
Trade	8.5	7.2	9.1	8.8	–	29.2[a]	–
Finance, Insurance and Real Estate	21.5	8.9	21.3	27.3	–	35.8[a]	–
Community, Business and Personal Services	4.7	4.0	4.6	7.5	–	6.1[a]	–

(a) Establishments with 250 or more employees were aggregated because the number of establishments in each size category was small.

show how the trainees were distributed between industries or how many employees were enrolled in the training programmes. The data in Table 10 show that seven of every ten trainees were employed in the manufacturing or transportation industries. Although the manufacturing industries accounted for over half of the employees, only one-third of the trainees worked in that sector of the economy.[9] Conversely, the transportation industry reported 35.9 per cent of all trainees, but only 12.6 per cent of the employees.[10]

An examination of the percentage of employees in short-term training in each industry points up the emphasis given to training in the transportation industry: over one-fifth of all employees in that industry were enrolled in a training programme, compared to 4.8 per cent in the manufacturing industry. The service industry ranked last with less than one per cent of its employees in training.

The distribution of trainees by size of establishment reveals the heavy involvement of large establishments in short-term formal training (see Table 11). Over eighty per cent of the trainees worked in establishments with one thousand or more employees. This proportion is much higher than would be expected on the basis of total employment in these establishments: they employed only 39.1 per cent of the workers covered by the survey. Conversely, smaller establishments accounted for a higher proportion of employees than of trainees.

The heavy concentration of short-term training in large establishments is reflected in the proportion of employees in training in each size category. In establishments with one thousand or more employees, 14.8 per cent of the employees were in training, but this proportion is less than three per cent in each of the smaller size categories.

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9 From the last column of Table 10, it will be noted that the distribution of employees reported in the survey of industry-sponsored training programmes follows the distribution reported by Statistics Canada quite closely.

10 The inclusion of safety and orientation trainees shown in the third column changes the distribution of trainees by industry, particularly in the manufacturing and transportation industries. These changes reflect inter-industry differences in training programmes which are discussed in the following section.

Table 10

Percentage of Employees in Short-Term Training and Percentage Distribution of Trainees and Employees, by Industry, Ontario, August 1, 1968 – July 31, 1969

Industry	Percentage of Employees in Training	Percentage Distribution of			
		Trainees (excluding safety and orientation)	Trainees (including safety and orientation)	Employees (Ontario survey)(a)	Employees (Statistics Canada survey)(b)
Total	6.9	100.0	100.0	100.0	100.0
Mines, Quarries and Oil Wells	4.0	1.3	1.6	2.4	1.8
Manufacturing	4.8	34.2	43.0	54.2	50.2
Transportation, Communication and Other Utilities	21.4	35.9	28.7	12.6	13.0
Trade	6.4	12.1	13.4	14.2	17.6
Finance, Insurance and Real Estate	13.8	14.9	11.9	8.1	7.3
Community, Business and Personal Services(c)	0.9	1.6	1.4	8.5	10.1

(a) The percentages in this column are based on the responses to the Survey of Industry-Sponsored Training Programmes in Ontario. Data refer to employment as of July 31, 1969.

(b) Source: Statistics Canada, Employment and Average Weekly Wages and Salaries, Cat. No. 72-002, August, 1969. Data refer to the last pay period in July.

(c) This category excludes education and related services, health and welfare services, and religious organizations, which are not included in the Statistics Canada survey.

Table 11

Percentage of Employees in Short-Term Training and Percentage Distribution of Trainees and Employees, by Size of Establishment, Ontario, August 1, 1968 – July 31, 1969

Size of Establishment (Employees)	Percentage of Employees in Training	Percentage Distribution of		
		Trainees (excluding safety and orientation)	Trainees (including safety and orientation)	Employees (Ontario survey)(a)
Total	6.9	100.0	100.0	100.0
15-49	1.4	2.0	1.7	9.9
50-99	1.3	1.9	1.7	10.0
100-249	1.7	4.0	4.3	16.6
250-499	2.0	3.7	5.1	12.7
500-999	2.4	4.1	4.5	11.7
1,000 and Over	14.8	84.3	82.7	39.1

(a) The percentages in this column are based on the responses to the Survey of Industry-Sponsored Training Programmes in Ontario. Data refer to employment as of July 31, 1969.

It will be noted that the ranking of industries by volume of training depends on the measure used. When the proportion of establishments with a formal training programme is used, the highest ranking industry is finance, followed by the mining and transportation industries. If the measure of volume is the percentage of employees in training, transportation ranks first, followed by finance and trade. The first measure, the proportion of establishments with formal training programmes, is useful in indicating whether formal training is widespread or restricted to a few employers in an industry. The second measure, the proportion of employees in training, indicates the extent to which employees in an industry are being trained.

Types of Short-Term Courses

A question of considerable interest, especially in regard to public policy, has been whether certain industries concentrate their training resources on particular types of training. If public policy is directed toward increasing the number of persons with certain skills, industries which already train workers in these skills may be encouraged to expand their training activities; alternatively, methods of developing training programmes in industries which do not presently sponsor them would have to be devised or institutional classroom training programmes would have to be developed or expanded.

In this section, the types of courses provided by industry are examined to identify differences between industries and employment size categories. For this purpose, two aspects of formal training are considered: the distribution of trainees among types of courses and the distribution of the courses among industries and size of establishment categories.

Types of Courses by Industry

Looking first at the overall distribution of the trainees, safety and orientation training accounted for over one-quarter of all trainees (see

Table 12

Percentage Distribution of Short-Term Trainees, by Type of Training and Industry, Ontario, August 1, 1968 – July 31, 1969

Type of Training	Industry						
	Total	Mines, Quarries and Oil Wells	Manufacturing	Transportation, Communication and Other Utilities	Trade	Finance, Insurance and Real Estate	Community, Business and Personal Services
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Administrative or Executive	4.3	0.7	4.9	1.8	4.6	7.4	10.7
Technician or Technologist	6.5	..	7.8	10.0	..	..	11.6
Supervisory	10.4	4.2	13.4	6.5	8.8	12.4	5.3
Industrial or Business Processes	2.7	0.6	3.2	2.0	..	5.9	1.7
Clerical[a]	9.7	..	1.8	9.8	2.3	46.9	12.6
Trade or Craft Skills	9.8	23.9	3.2	26.8	3.1	..	1.3
Programming, Computer Training or Numerical Control	5.2	--	9.7	2.9	0.6	1.4	0.9
Machine Operation and Control	2.0	21.6	3.8	..	..	--	--
Academic Upgrading	1.0	..	1.0	..	..	2.6	2.5
Merchandising or Sales	8.7	--	3.3	1.7	40.8	9.0	14.2
Personal Services	1.3	..	1.7	1.1	..	..	7.8
Safety	16.6	42.6	24.8	9.4	19.0	..	3.1
Orientation	11.7	--	18.3	0.8	16.3	10.2	14.7
Other	10.1	5.6	3.1	26.8	2.4	3.8	13.6

(a) Includes office machine operators

.. less than 0.5 per cent. Columns do not add to 100.0 per cent when observations of less than 0.5 per cent have been excluded.

-- no observation

Table 12). This was followed by supervisory (including foreman) training, clerical and trade or craft training, and merchandising and sales training.[11]

As expected, these patterns varied considerably between industries. Mining emphasized safety training which accounted for 42.6 per cent of the trainees. Training in trade or craft skills and in machine operation and control were also important. In manufacturing and trade, safety and orientation training were both common, accounting for over a third of all trainees in each industry. The trade industry was involved most heavily in merchandising and sales training, while transportation emphasized training in trade and craft skills. Clerical training accounted for almost half of all trainees in finance; in the service industry, trainees were distributed more evenly between several types of training. Supervisory training was the only type of instruction in which all industries reported a significant proportion of trainees.

While the data in Table 12 show the distribution of trainees between various courses in each industry, they do not directly show the distribution of courses. An examination of the courses organized by industry may identify those which are quite common, but in which few trainees are enrolled. Such an examination would indicate whether some training facilities and expertise have been developed although, at present, they may be available only to a small proportion of the trainees.

To examine this dimension of privately-sponsored training programmes, the distribution of the courses in which trainees were enrolled is shown in Table 13. Looking at the overall distribution of the courses, there is considerable variation from the distribution of trainees shown in Table 12. For example, safety and orientation courses accounted for only 9.5 per cent of all courses, but for 28.3 per cent of the trainees. Conversely, while only 4.3 per cent of the trainees were enrolled in administrative and executive training courses, 15.0 per cent of the courses reported in the survey were in that category. For other types of training, the percentages of courses and of trainees were approximately equal (e.g., supervisory, clerical and trade or craft training). These differences in distributions suggest that certain types of training, such as

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[11] It should be noted that the figures on which these percentages are based probably include some double-counting. The reason for this is that respondents were asked to report the number of persons receiving each type of training during the reference year. An employee who received training both in safety procedures and in a trade skill, for example, would have been reported twice.

Table 13

Percentage Distribution of Short-Term Courses, by Type of Training and Industry, Ontario, August 1, 1968 – July 31, 1969

Type of Training	Industry						
	Total	Mines, Quarries and Oil Wells	Manufacturing	Transportation, Communication and Other Utilities	Trade	Finance, Insurance and Real Estate	Community, Business and Personal Services
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Administrative or Executive	15.0	8.6	14.2	9.2	17.0	18.7	17.8
Technician or Technologist	5.6	2.8	7.3	3.3	2.0	2.1	9.7
Supervisory	14.4	11.4	15.4	12.5	11.4	18.7	12.1
Industrial or Business Processes	4.1	5.7	5.1	2.5	2.8	3.6	2.4
Clerical[a]	11.0	8.6	8.3	9.2	11.3	21.6	18.6
Trade or Craft Skills	9.9	25.7	9.2	15.0	15.8	0.7	2.4
Programming, Computer Training or Numerical Control	4.2	–	3.7	4.2	3.6	8.6	4.8
Machine Operation and Control	3.9	11.4	6.6	–	1.6	–	–
Academic Upgrading	3.2	8.6	4.3	1.7	0.4	2.2	3.2
Merchandising or Sales	9.7	–	6.3	10.8	21.9	10.1	5.6
Personal Services	0.8	2.9	0.4	–	0.4	0.7	4.8
Safety	5.0	5.7	6.4	8.3	2.4	0.7	1.6
Orientation	4.5	–	4.7	2.5	4.1	6.5	6.5
Other	8.7	8.6	8.1	20.8	5.3	5.8	10.5

(a) Includes office machine operators

– no observation

safety and orientation, are directed toward a large number of trainees who require a general understanding of the establishment's policies and operations. Other types of training, such as administrative and executive training, may be aimed at a small number of persons with specialized needs. In addition to the needs of the persons being trained, differences in the cost of various courses may, in part, determine the number of trainees enrolled in each course.

Types of Courses by Size of Establishment

To a limited extent, establishments in the various size categories tended to emphasize different courses (see Table 14). The proportion of persons receiving technician and technologist training and instruction in computer programming and numerical control was considerably higher in establishments with 1,000 employees or more than in smaller establishments. Conversely, training in merchandising and sales tended to be proportionately more important in smaller establishments. Safety and orientation training accounted for a larger percentage of the trainees in establishments with one hundred or more employees than in smaller establishments.[12] Finally, administrative and executive training and supervisory training appeared to be equally important in all size categories.[13]

The Length of Courses

To this point, the measures of industry-sponsored formal training in Ontario have focussed on the volume of training; these measures do not reflect the content, scope or depth of the courses. The survey of industry-sponsored training programmes was not designed to collect such detailed information. Although no direct analysis of these characteristics

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12 In a follow-up survey of responding establishments, the answers of smaller establishments (i.e. those with less than one hundred employees) were found to be less accurate than those of larger establishments. In view of the small percentage of trainees reported by these smaller establishments, inaccurate reporting by them would not seriously affect the overall results.

13 The distribution of courses by size of establishment is presented in Appendix B.

Table 14

Percentage Distribution of Short-Term Trainees, by Type of Training and Size of Establishment, Ontario, August 1, 1968 – July 31, 1969

Type of Training	Size of Establishment (Employees)						
	Total	15-49	50-99	100-249	250-499	500-999	1,000 and over
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Administrative or Executive	4.3	5.3	6.2	5.4	2.8	5.1	4.3
Technician or Technologist	6.5	3.7	3.5	4.3	1.2	0.5	7.4
Supervisory	10.4	6.4	8.3	8.1	9.6	7.7	10.8
Industrial or Business Processes	2.7	3.3	2.2	6.9	4.3	3.8	2.4
Clerical[a]	9.6	12.8	10.0	3.0	1.1	2.8	10.8
Trade or Craft Skills	9.8	11.6	11.4	4.2	6.9	11.4	10.1
Programming, Computer Training or Numerical Control	5.2	0.6	1.0	0.8	0.8	1.9	6.1
Machine Operation and Control	2.1	2.1	11.2	8.4	5.9	12.5	0.7
Academic Upgrading	1.0	0.6	0.6	2.5	1.4	2.6	0.8
Merchandising or Sales	8.7	25.0	19.6	12.1	11.2	7.0	7.9
Personal Services	1.2	2.4	0.7	..	1.1	3.3	1.2
Safety	16.7	8.2	14.7	26.3	36.0	14.4	15.3
Orientation	11.7	7.1	5.8	7.3	12.6	19.4	11.7
Other	10.1	10.9	4.8	10.7	5.1	7.6	10.5

(a) Includes office machine operators.

of training can be undertaken, the length of different courses can serve as a very rough guide to the level of skill acquired by the trainee. While it remains a very imperfect substitute for an evaluation of course content, the length of the training period provides an additional insight into the role industry plays in skill development through training activities other than apprenticeship.

Most of the trainees were enrolled in relatively short courses (see Table 15). More than two thirds (67.9 per cent) took courses which lasted less than one month and 22.6 per cent attended courses of one to six months' duration. Only 6.2 per cent received instruction for six months to two years and 3.3 per cent for two years or more.

The distribution of trainees by length of training period varied widely between the courses. The shortest were in programming, computer training and numerical control, personal services, safety and orientation; over 90 per cent of the trainees taking these courses were in training for less than one month. Administrative, supervisory, sales, and industrial or business process trainees also followed short courses. At the other end of the scale, the longest course was academic upgrading in which 36.9 per cent of the trainees followed courses for two years or more.

The distribution of trainees by length of course masks the large proportion of long courses organized or sponsored by industry (see Table 16). While only 9.5 per cent of the trainees were enrolled in courses lasting six months or more, 35.8 per cent of the courses were of that duration. On the other hand, 67.9 per cent of the trainees received instruction for less than one month, but only 40.2 per cent of the courses fell in that category. These data suggest that long courses are offered to small groups of trainees, while short courses are aimed at larger groups.

As expected, the length of courses varied widely between industries and establishment size categories. Courses were shortest in the manufacturing and finance industries (see Table 17). These figures may, in part, reflect a high proportion of short courses in the manufacturing industry, while supervisory, merchandising and sales courses appear to underlie the preponderance of short courses in trade and finance. The length of training was greatest in the mining and transportation industries; longer courses, particularly in trade or craft skills and machine operation and control, were important in these industries. In the transportation

Table 15

Percentage Distribution of Short-Term Trainees, by Type of Training and Length of Courses, Ontario, August 1, 1968 – July 31, 1969

Type of Training	Length of Courses				
	Total	Less than 1 Month	1-6 Months	6 Months – 2 Years	2 Years or more
Total	100.0	67.9	22.6	6.2	3.3
Administrative or Executive	100.0	76.9	9.9	4.0	9.2
Technician or Technologist	100.0	50.9	47.3	1.3	0.5
Supervisory	100.0	78.4	9.5	9.2	2.9
Industrial or Business Processes	100.0	69.2	9.7	11.7	9.4
Clerical[a]	100.0	65.1	29.6	2.6	2.7
Trade or Craft Skills	100.0	10.2	73.9	5.2	10.7
Programming, Computer Training or Numerical Control	100.0	97.1	1.8	0.6	0.5
Machine Operation and Control	100.0	18.5	52.9	23.9	4.7
Academic Upgrading	100.0	30.6	16.1	16.4	36.9
Merchandising or Sales	100.0	73.9	3.7	21.7	0.7
Personal Services	100.0	96.7	0.7	0.5	2.1
Safety	100.0	92.3	2.2	2.7	2.8
Orientation	100.0	97.2	2.8	--	--
Other	100.0	23.2	64.0	11.1	1.7

(a) Includes office machine operators

-- no observation

Table 16

Percentage Distribution of Short-Term Courses, by Type of Training and Length of Courses, Ontario, August 1, 1968 – July 31, 1969

Type of Training	Length of Courses				
	Total	Less than 1 Month	1-6 Months	6 Months – 2 Years	2 Years or more
Total	100.0	40.2	24.0	18.9	16.9
Administrative or Executive	100.0	40.5	15.6	16.1	27.8
Technician or Technologist	100.0	28.9	29.0	25.0	17.1
Supervisory	100.0	37.8	28.6	22.4	11.2
Industrial or Business Processes	100.0	28.6	16.0	26.8	28.6
Clerical[a]	100.0	37.6	31.2	16.9	14.3
Trade or Craft Skills	100.0	22.2	17.1	18.5	42.2
Programming, Computer Training or Numerical Control	100.0	53.5	24.1	13.8	8.6
Machine Operation and Control	100.0	20.4	46.3	20.4	12.9
Academic Upgrading	100.0	13.9	23.3	46.5	16.3
Merchandising or Sales	100.0	56.8	20.5	15.9	6.8
Personal Services	100.0	58.4	8.3	25.0	8.3
Safety	100.0	68.6	19.4	7.5	4.5
Orientation	100.0	81.0	19.0	–	–
Other	100.0	34.4	36.1	26.2	3.3

(a) Includes office machine operators
– no observation

Table 17

Percentage Distribution of Short-Term Trainees, by Industry and Length of Courses, Ontario, August 1, 1968 – July 31, 1969(a)

Industry	Length of Courses				
	Total	Less Than 1 Month	1-6 Months	6 Months – 2 Years	2 Years or more
Total	100.0	56.6	31.2	8.2	4.0
Mines, Quarries and Oil Wells	100.0	22.0	35.1	20.5	22.4
Manufacturing	100.0	81.8	9.6	4.7	3.9
Transportation, Communication and Other Utilities	100.0	12.6	86.4	0.5	0.5
Trade	100.0	52.0	10.0	32.2	5.8
Finance, Insurance and Real Estate	100.0	79.8	4.5	8.8	6.9
Community, Business and Personal Services	100.0	49.2	30.9	14.7	5.2

(a) Safety and orientation trainees are excluded from this Table.

industry, the presence of longer courses (e.g., technician and technologist, and trade or craft skills) would partly explain the low proportion of trainees taking short courses.

The distribution of trainees by establishment size category shows that training in large establishments (those with 1,000 or more employees) tended to be of shorter duration than in smaller ones (see Table 18). This appears to reflect the heavier emphasis placed by large establishments on supervisory and programming training, while smaller establishments were more involved in machine operation and control training, which is a course of above-average duration. Although the proportion of trainees who attended courses for less than one month is lowest in the smaller establishments, their impact on the total distribution of trainees by length of courses is negligible since these establishments employed only a small fraction of all trainees.

On-The-Job and Classroom Training

A critical question regarding government participation in a particular training programme is whether classroom training, on-the-job training or some combination of the two is most appropriate. Although an adequate answer to this question would require detailed studies, the survey of industry-sponsored training programmes provides some insight into industry's current practices. The data in Table 19 show the average percentage distribution of time between on-the-job and classroom training in various courses.

For all training programmes, 71.2 per cent of the time spent in training was provided in a classroom environment; the rest of the time was spent in a production environment. Furthermore, the average time spent in classroom training within the establishment was much greater than that spent outside (64.8 per cent and 6.4 per cent respectively).

As expected, there is considerable variation between courses in the amount of time spent either in a production or classroom environment. For clerical, machine operation and control, merchandising and sales, and orientation courses, the time was spent about equally on-the-job and in a classroom within the establishment. In general, for other types of training, the greatest proportion of training time was spent in a classroom environment within the establishment. An exception to this occurred in academic upgrading courses: four-fifths of the time was spent in a

Table 18

Percentage Distribution of Short-Term Trainees, by Size of Establishment and Length of Courses, Ontario, August 1, 1968 – July 31, 1969(a)

Size of Establishment (Employees)	Length of Courses				
	Total	Less than 1 Month	1-6 Months	6 Months – 2 Years	2 Years or more
Total	100.0	56.6	31.2	8.2	4.0
15-49	100.0	45.1	26.3	13.5	15.1
50-99	100.0	29.8	33.6	16.8	19.8
100-249	100.0	44.7	27.5	18.8	9.0
250-499	100.0	34.5	38.7	17.9	8.9
500-999	100.0	50.0	21.6	16.8	11.6
1,000 and Over	100.0	59.5	31.7	6.4	2.4

(a) Safety and orientation trainees are excluded from this Table.

Table 19

Percentage of Training Time Spent on the Job and in Classrooms (Within or Outside the Establishment) by Type of Short-Term Training, Ontario, August 1, 1968 – July 31, 1969

Type of Training	Percentage of Training Time			
	Total	On the Job	In Classrooms	
			Within the Establishment	Outside the Establishment
Total	100.0	28.8	64.8	6.4
Administrative or Executive	100.0	32.0	35.3	32.7
Technician or Technologist	100.0	1.7	95.0	3.3
Supervisory	100.0	26.4	55.0	18.6
Industrial or Business Processes	100.0	25.1	65.3	9.6
Clerical (a)	100.0	46.4	53.0	0.6
Trade or Craft Skills	100.0	25.3	72.1	2.6
Programming, Computer Training or Numerical Control	100.0	0.6	95.8	3.6
Machine Operation and Control	100.0	49.2	48.1	2.7
Academic Upgrading	100.0	1.7	19.9	78.4
Merchandising or Sales	100.0	51.3	42.8	5.9
Personal Services	100.0	18.3	80.4	1.3
Safety	100.0	37.9	59.2	2.9
Orientation	100.0	44.9	54.5	0.6
Other	100.0	8.5	88.0	3.5

(a) Includes office machine operators.

classroom outside the establishment. Finally, in administrative and executive training programmes, about one-third of the time was spent in each of the three categories: on-the-job and in classrooms within and outside the establishment.

The variations in the distribution of time between on-the-job and classroom training are apparent when analysed by industry and establishment size category. As the data in Table 20 show, the manufacturing and transportation industries were the only ones in which the largest proportion of time was spent in a classroom within the establishment. It will be noted that these two industries accounted for about seventy per cent of all trainees (see Table 10). In all other industries except service, more than half of the time was spent in on-the-job training. In the service industry, on-the-job and in-industry classroom training each accounted for forty per cent of the time while twenty per cent consisted of classroom training outside the establishment.

For small establishments, classroom training outside the establishment accounted for a larger proportion of the average time spent in training than it did in larger ones (see Table 21). The proportion of training time accounted for by this form of training fell from 31.6 per cent in establishments with fifteen to forty-nine employees to 4.5 per cent in those with 1,000 employees or more. As expected, classroom training within the establishment was most common among the large establishments: 69.5 per cent of the training time was spent in this form of training. An explanation of this pattern may be that large firms have the ability to organize their own courses, while smaller ones must rely on training facilities outside the establishment. In this regard, it was observed in Chapter II that large establishments were more likely than the smaller ones to have a full-time person in charge of training. Also, economies of scale realized by providing training to large numbers of workers would encourage large firms to engage in classroom training within the establishment.

Occupational Destination of Trainees

The rapid growth of "white collar" and service occupations has been one of the main characteristics of the occupational structure of the Canadian labour force in recent years.[14] Between 1951 and 1961, the labour force increased by 22.4 per cent, but in white collar occupations

[14] See Statistics Canada, Census of Canada, 1961.

Table 20

Percentage of Training Time Spent on the Job and in Classrooms, by Industry, Ontario, August 1, 1968 – July 31, 1969

Industry	Percentage of Training Time			
	Total	On the Job	In Classrooms	
			Within the Establishment	Outside the Establishment
Total	100.0	28.8	64.8	6.4
Mines, Quarries and Oil Wells	100.0	51.9	31.2	16.9
Manufacturing	100.0	18.8	73.3	7.9
Transportation, Communication and Other Utilities	100.0	5.8	90.5	3.7
Trade	100.0	62.5	31.0	6.5
Finance, Insurance and Real Estate	100.0	58.4	33.8	7.8
Community, Business and Personal Services	100.0	40.5	39.6	19.9

Table 21

Percentage of Training Time Spent on The Job and in Classrooms, by Size of Establishment, Ontario, August 1, 1968 – July 31, 1969

Size of Establishment (Employees)	Percentage of Training Time			
	Total	On the Job	In Classrooms	
			Within the Establishment	Outside the Establishment
Total	100.0	28.8	64.8	6.4
15-49	100.0	31.1	37.3	31.6
50-99	100.0	47.2	27.9	24.9
100-249	100.0	35.4	48.6	16.0
250-499	100.0	45.1	40.3	14.6
500-999	100.0	33.4	53.6	13.0
1,000 and Over	100.0	26.0	69.5	4.5

it increased by 44.3 per cent. The corresponding figure for service and recreation occupations was 54.4 per cent. In contrast, the labour force in "blue collar" occupations grew by only 13.1 per cent, and in primary occupations, it fell by 20.8 per cent between 1951 and 1961.

The educational and training requirements implied by these changes in the structure of the labour force were satisfied by three sources: immigration, educational institutions and training in industry. Although some data are available on the contribution of educational institutions and immigration, little is known of the role of private industry in this transformation of the labour force.[15]

The results of the survey of industry-sponsored training programmes in Ontario provide some insight into the role played by private employers. Two aspects of this role are considered in this section. First, the occupational destination of the trainees is examined. Second, for each occupation, the ratio of trainees to all employees in the occupation is presented. Once again, establishments are classified by industry and size category.

Occupational Destination of Trainees by Industry.[16]

As shown in Table 22, approximately two-thirds of the trainees in short-term industry training were destined for white collar occupations. The distribution of this group was as follows: supervisors (including

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15 For data on education, see O.J. Firestone, Industry and Education – A Century of Canadian Development (Ottawa: University of Ottawa Press), 1969, pp. 169-175; Gordon W. Bertram, The Contribution of Education to Economic Growth, Economic Council of Canada, Staff Study No. 12 (Ottawa: The Queen's Printer), 1966; Wolfgang M. Illing and Zoltan E. Zsigmond, Enrolment in Schools and Universities, 1951-52 to 1975-76 (Ottawa: The Queen's Printer), 1967. For immigration data, see Canada Department of Manpower and Immigration, 1969 Immigration Statistics (Ottawa: The Queen's Printer), 1970; and Warren E. Kalbach, The Impact of Immigration on Canada's Population, Statistics Canada, Ottawa, 1970. Other references, including Census data, are given in Department of Manpower and Immigration, Immigration, Emmigration and Ethnic Groups in Canada – A Bibliography of Research 1964-1968 (Ottawa: The Queen's Printer), 1969.

16 The data in this section exclude trainees enrolled in safety and orientation programmes.

Table 22

Percentage Distribution of Short-Term Trainees by Occupation and Industry, Ontario, August 1, 1968 – July 31, 1969(a)

Occupation	Industry						
	Total	Mines, Quarries and Oil Wells	Manufacturing	Transportation, Communication and Other Utilities	Trade	Finance, Insurance and Real Estate	Community, Business and Personal Services
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Managerial and Executive	5.4	0.5	7.0	0.7	8.3	10.8	8.9
Professional	4.5	1.0	4.9	5.9	2.9	1.0	10.5
Technical	7.1	1.4	15.1	3.5	1.6	1.2	14.9
Supervisor and Foreman	19.0	9.1	24.2	18.3	9.4	19.3	7.6
Clerical	14.0	1.2	5.4	9.6	5.0	52.5	14.7
Sales	16.0	–	18.3	0.5	62.5	12.9	8.6
Service	1.6	0.2	0.3	0.5	3.1	1.9	31.2
Craftsmen and Production Process Workers	19.2	18.6	20.5	32.0	4.1	. .	2.2
Other	13.2	68.0(b)	4.3	29.0	3.1	0.4	1.4

(a) The data in this table exclude trainees enrolled in safety and orientation programmes.

(b) Of the total number of trainees in this industry, 67.3 per cent were miners, quarrymen and related workers.

. . less than 0.5 per cent

– no observation

foremen), 19.0 per cent; sales workers, 16.0 per cent; clerical workers, 14.0 per cent; technicians, 7.1 per cent; managers, 5.4 per cent; and professionals, 4.5 per cent. In the blue collar occupations, craftsmen and production process workers (excluding apprentices) accounted for 19.2 per cent of all trainees.

Each industry tended to emphasize certain occupations in its training activities; these occupations reflect the work performed in each industry. Trainees in the craftsman and production process worker category constituted important groups in manufacturing, transportation and mining. Sales workers accounted for three-fifths of the trainees in trade, while over half of the trainees in the finance industry were clerical workers. Workers in service occupations were the largest group in the service industry.

Since the occupational destination of trainees appears to reflect the occupational composition of each industry, it is desirable to use a measure which takes into account the number of employees in each occupation; the second measure of occupational destination is the ratio of trainees to all employees in each occupational category.

As noted earlier, 6.9 per cent of all employees were enrolled in short-term formal training programmes during the reference year. The proportion of employees in training was above this figure in the supervisory, technical, sales and managerial groups (see Table 23). The lowest percentage was reported among service workers. The proportion of technicians and of supervisors or foremen was above the overall average of 6.9 per cent in all industries except mining and services. In the transportation industry, almost half of the supervisors and foremen, and over two out of every five craftsmen and production process workers were in training at some time during the reference year.

Occupational Destination by Size of Establishment

The data in Table 24 present limited evidence that establishments of different sizes tend to emphasize training in certain occupations. For example, large establishments (those with 1,000 or more employees) tend to emphasize training for supervisors or foremen more than the smaller establishments, while trainees in service occupations are concentrated in smaller establishments. Craftsmen and production process workers are equally important in all size categories.

Table 23

Percentage of Employees in Short-Term Training by Occupation and Industry, Ontario, August 1, 1968 – July 31, 1969(a)

Occupation	Industry						
	Total	Mines, Quarries and Oil Wells	Manu-fact-uring	Transport-ation, Com-munication and Other Utilities	Trade	Finance, Insurance and Real Estate	Community, Business and Personal Services
Total	6.9	4.0	4.8	21.4	6.4	13.8	0.9
Managerial and Executive	9.9	0.9	10.7	3.8	10.1	19.7	2.6
Professional	4.6	1.7	10.8	74.5	17.8	7.5	..
Technical	18.9	2.2	24.9	25.4	10.3	10.8	4.2
Supervisor and Foreman	21.8	5.2	18.3	47.5	11.3	30.6	2.4
Clerical	6.2	0.8	2.2	14.7	2.1	13.5	1.0
Sales	11.5	–	17.2	11.4	9.8	9.9	3.0
Service	1.9	0.7	1.8	1.8	5.8	7.1	1.1
Craftsman and Production Process Workers	5.4	3.9	2.5	41.1	2.1	..	0.5
Other	3.7	4.6	0.7	13.6	1.2	2.0	..

(a) The data in this table exclude trainees enrolled in safety and orientation programmes.

.. less than 0.5 per cent

– no observation

Table 24

Percentage Distribution of Short-Term Trainees, by Occupation and Size of Establishment, Ontario, August 1, 1968 – July 31, 1969(a)

Occupation	Size of Establishment (Employees)						
	Total	15-49	50-99	100-249	250-499	500-999	1,000 and over
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Managerial and Executive	5.4	5.9	7.7	5.9	5.2	13.4	4.9
Professional	4.5	4.3	5.1	6.1	6.6	3.1	4.4
Technical	7.1	3.7	5.2	9.3	6.6	1.5	7.4
Supervisor and Foreman	19.0	8.3	11.9	16.2	14.6	13.4	20.1
Clerical	14.0	14.9	14.3	9.0	5.4	5.8	15.0
Sales	16.0	29.8	21.0	13.5	16.3	12.1	15.9
Service	1.6	10.4	3.0	8.7	8.5	5.3	0.6
Craftsman and Production Process Workers	19.2	15.8	17.2	16.8	17.4	21.5	19.3
Other	13.2	6.9	14.6	14.5	19.4	23.9	12.4

(a) The data in this table exclude trainees enrolled in safety and orientation programmes.

Even when the number of employees in each occupational category is taken into account, training in large establishments is most common among supervisors and foremen (see Table 25). High percentages of employees in training were also reported among technicians, managers and sales workers. These percentages indicate that the volume of training in these categories was not only due to the fact that they accounted for large proportions of all employees in large establisments; when the occupational composition of each size category is taken into account, training is more common in these occupations than in the others.

Table 25

Percentage of Employees in Short-Term Training, by Occupation and Size of Establishment, Ontario, August 1, 1968 – July 31, 1969

Occupation	Size of Establishment (Employees)						
	Total	15-49	50-99	100-249	250-499	500-999	1,000 and over
Total	6.9	1.4	1.3	1.7	2.0	2.4	14.8
Managerial and Executive	9.9	1.1	2.1	2.7	3.4	12.0	23.6
Professional	4.6	3.0	2.5	2.7	2.3	1.3	6.1
Technical	18.9	3.0	2.9	6.1	5.4	1.8	35.2
Supervisory and Foreman	21.8	2.0	2.6	4.7	4.7	5.7	46.8
Clerical	6.2	1.5	1.3	1.0	0.7	0.9	12.9
Sales	11.5	3.5	2.9	2.5	5.0	3.9	21.6
Service	1.9	1.1	0.5	2.7	4.5	2.3	1.8
Craftsman and Production Process Workers	5.4	1.2	0.9	1.0	1.2	2.2	12.6
Other	3.7	..	0.7	0.9	1.3	1.8	8.8

(a) The data in this table exclude trainees enrolled in safety and orientation programmes.

.. less than 0.5 per cent

CHAPTER IV

SOME IMPLICATIONS OF THE SURVEY RESULTS FOR GOVERNMENT SUPPORT OF TRAINING IN INDUSTRY

In view of the growing involvement of government in training in industry, the Ontario survey was undertaken to obtain information on the training activities of employers. The results of that survey have been presented in the previous Chapters of this report. In this Chapter, the implications of the survey results for government participation in training in industry are discussed, especially the problems and limitations of public support of such training. While the discussion is generally limited to the survey findings, it draws upon some of the related literature and, to provide additional insights into the characteristics of establishments which sponsor formal training in Ontario, data other than those collected in the survey are introduced.

The data reviewed in this report reveal that formal industry-sponsored training is concentrated in a small group of large firms. As expected, the types of training and the occupational destination of trainees reflect the tasks performed in each industry. For example, the finance industry emphasizes clerical training while the trade industry focusses on merchandising and sales training. Furthermore, most of the trainees are enrolled in courses of relatively short duration.

These findings suggest that employers sponsoring formal training tend to tailor their programmes to meet their own specific needs. This interpretation of the data is consistent with the view that employers will invest in training only when it is profitable for them to do so.[17] Since a person trained in a narrow range of skills is unlikely to be able to use those skills in other firms, the training firm faces little risk that the employee will leave and thus deprive it of the return on its investment in training. Conversely, employers may be reluctant to undertake long-term general training in a broad range of skills because of the higher cost and greater risk of losing the employee to other firms who require these skills.

Despite their reluctance to provide training that does not meet the specific needs of the firm, employers may be compelled to offer broader training programmes if certain skills are required in the firm's production

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17 See Gary S. Becker, Human Capital – A Theoretical and Empirical Analysis, with Special Reference to Education (New York and London: Columbia University Press), 1964.

or innovation process.[18] If the firm's skill requirements cannot be met by recruiting workers from outside the firm, employers may invest in general training and take the risk of losing their investment in training if the worker leaves the firm. While little is known at present regarding the reasons underlying employers' decisions to invest in longer or broader courses, the need for skills which cannot be obtained in any other way may be an important factor responsible for some of the longer courses observed in this survey.

The heavy emphasis of firms on short courses raises several questions about government's support of training-in-industry. First, to stimulate firms to provide general training, it would appear that a large part of the financing of such training would have to be undertaken by government. However, previous studies suggest that employers may be reluctant to become involved with government in this type of training; if this conclusion applies to employers in Ontario, it may be difficult to encourage firms to provide general training even if government incentives were very attractive.[19]

Industry's emphasis on short courses suggests that its ability to design and implement broader training programmes may be limited. Even among large establishments, only slightly more than half reported at least one full-time person in charge of training. The tasks of job analysis, curriculum design, organization of training programmes and trainee selection would become more complex than at present in a programme directed toward providing a broad range of skills to employees. The survey results underline the need to take into consideration the existing training capacity of private industry and its ability to expand that capacity. If the objective of public policy is to use the private sector as an agent for developing skills in the labour force, its ability to fulfil that role would have serious implications for the nature and degree of government involvement in private training programmes.

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18 See R.S. Echaus, "Investment in Human Capital: A Comment," Journal of Political Economy, Vol. 71, October, 1963, pp. 501-504; and Michael J. Piore, "On-the-Job Training and Adjustment to Technological Change," The Journal of Human Resources, Vol. III, No. 4, pp. 435-449.

19 See J.L. Iacobelli, Training Programs of Private Industry in the Greater Cleveland Area, The University of Texas at Austin (Unpublished Ph.D. thesis), 1969.

Criteria for Selecting Establishments

An important aspect of the government's attempt to stimulate training in industry is the selection of training firms. The nature and level of assistance required by government may be strongly influenced by the type of establishment selected as a training agent. Given limited resources, criteria are required to determine which firms should receive government support. The selection of training firms and its implications for public support of training in industry are discussed below.

In this report, the results of the survey of industry-sponsored training programmes have been presented to identify some characteristics of training firms. To gain additional insights into the nature of these establishments, it is useful to examine related data from other sources. An important characteristic of training firms, the turnover rate, has been mentioned. In this section, this rate and a related one, the wage rate, are discussed. The implications of using these rates as criteria for the selection of establishments as training agents are examined.

There are several reasons underlying the use of turnover rates as a criterion for selecting training establishments. First, the volume of inter-firm mobility may reflect the extent to which the benefits of a training programme are dispersed throughout the economy rather than captured by an individual firm. Thus, high turnover rates can help identify industries in which training programmes would benefit the economy generally.[20] Second, if it is assumed that workers move in response to greater opportunities, high turnover rates suggest that workers are improving their economic position, at least partly because of the training they have received.

However, several factors may diminish the usefulness of turnover rates as a guide to government participation in training programmes. First, high turnover rates may be associated with low completion rates in training programmes. If turnover rates in an industry or firm are high, it is possible that these rates will be reflected in high dropout rates among trainees, i.e., workers would have a greater tendency to leave the firm

[20] Turnover rates can be used for this purpose to the extent that trained employees move to firms in which the skills acquired in the training programme will be used.

whether or not they were enrolled in training programmes. On the other hand, enrolment in a course might be a deterrent to mobility since workers may wish to complete their course before leaving the firm.[21]

Also, high turnover rates can be expected to discourage employers from training their workers since the probability that employers will reap the benefits of training is lower than in industries with low turnover rates. While high turnover rates may indicate that workers who have completed at least part of a training programme are benefitting from their courses, they may discourage employers from providing training.[22]

Government assistance may then have to be sufficient to compensate employers experiencing high separation rates for this risk element. Alternatively, the negative effect of high separation rates on employers could be diminished if workers paid some part of their training costs, either by accepting lower wages than they would otherwise receive or by direct payments. However, the potential benefits to the worker of such expenditures would depend on whether the training received was general or specific. If it is specific to a firm, turnover data for that firm's industry would be misleading, since workers could not make use of their training if they moved to other firms.[23]

Regardless of the effect of training on mobility, other factors may also be related to separatation rates. In addition to the place of work, the nature of the job and other working conditions, wage differentials may be important. Economic theory predicts that workers will move from

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21 An examination of the completion rates of training programmes subsidized by the Ontario Ministry of Labour during a one-year period ending in July 1968 shows no significant correlation with turnover rates. However, it should be noted that the turnover rates are aggregated from data provided to Statistics Canada by a large number of establishments while the completion rates refer to a much smaller number of establishments in each industry.

22 Although high turnover rates may discourage employers from training, they may have to train regardless of the turnover rate in order to meet work or production requirements.

23 While this agrument is valid in theory, it should be noted that, in practice, skills acquired in a formal training programme may have some degree of transferability.

low-paying to high-paying jobs when these are available and workers are qualified to perform them. Under these conditions, high separation rates in the lower paying, and presumably less productive firms and industries, suggest that the labour market is adequately performing its function of allocating labour. If wage rates were used as a criterion in selecting training firms, training resources may be directed to the most efficient and productive firms.

Some Characteristics of Training Establishments

The data presented in Table 26 show that the proportion of establishments with short-term formal training programmes is inversely related to turnover rates and directly related to average wage rates and to the average size of establishment.[24] For example, in the transportation industry, 12.4 per cent of the establishments reported a formal training programme. The turnover rate (3.4) was below average, while average weekly wages and salaries and the average size of establishment were both second highest among all industries. While these relationships are generally apparent in Table 26, they become more evident when the industries are disaggregated into their component groups, as discussed below.

To obtain a rough measure of the relationship between the percentage of establishments with training programmes and the turnover rate, Spearman's coefficient of rank correlation was calculated. The industries were disaggregated into twenty-six component groups and ranked. The value of the coefficient was – 0.77. Thirty-one industries were ranked in calculating the coefficient of correlation between the percentage of establishments with training programmes and average weekly wages and

[24] Until August 1966, Statistics Canada published data on hiring and separation rates. The rate of labour turnover was defined as the lower of these two rates. Both the hiring and separation rates were obtained by calculating the number of additions to the work force and the number of terminations of employment per 100 persons on the payroll of the establishment. Since this series of statistics has been discontinued, the last publication has been used in this study. See Statistics Canada: Hiring and Separation Rates in Certain Industries, March to August 1966 (Ottawa, June 1968), Cat. No. 72-006.

Table 26

Percentage of Establishments Reporting Short-Term Formal Training Programmes, Percentage of Employees in Training, Turnover Rates (July 1966), Average Weekly Wages and Salaries (July 1969), and Average Size of Establishment, by Industry, Ontario

Industry	Establishments with Training Programmes (per cent)	Employees in Training (per cent)	Turnover Rates[a]	Average Weekly Wages and Salaries[b] (in dollars)	Average Size of Establishment[c]
Total	9.1	6.9	5.2	--	139
Mines, Quarries and Oil Wells	14.0	4.0	4.4	143.21	192
Manufacturing	9.6	4.8	4.5	128.80	157
Transportation, Communication and Other Utilities	12.4	21.4	3.4	139.40	233
Trade	8.5	6.4	5.7	96.48	77
Finance, Insurance and Real Estate	21.5	13.8	3.9	119.00	282
Community, Business and Personal Services	4.7	0.9	5.2	88.34	110

(a) The rate of labour turnover is defined as the lower of the hiring or separation rates per 100 persons on payroll. Source: Statistics Canada, Hiring and Separation Rates in Certain Industries, March to August 1966 (Ottawa, June 1968) Catalogue No. 72-006. The turnover rates are classified on the basis of the 1948 Standard Industrial Classification Manual. Since the establishments responding to the Survey of Industry-Sponsored Training Programmes in Ontario are classified according to the 1960 Standard Industrial Classification Manual, only rough comparisons are possible between the survey results and the turnover data.

(b) Source: Statistics Canada, Employment and Average Weekly Wages and Salaries, August 1969, Cat. No. 72-002.

(c) Based on returns to the Survey of Industry-Sponsored Training Programmes in Ontario. Employment figures are for the last pay period in July 1969.

salaries; its value was 0.68. On the basis of thirty-four industries, the value of the coefficient for this percentage and the average size of establishment was 0.55.[25]

Similarly, the percentage of employees in training during the reference year is also related to turnover rates, average weekly wages and salaries and the average size of establishment, although the degree of correlation appears to be weaker than with the percentage of establishments reporting formal training programmes. The coefficients of correlation were – 0.48, 0.39 and 0.23, respectively. While the signs are consistent with the previous calculations, the first two coefficients are significant at the five per cent level and the third is significant only at the ten per cent level.[26]

Finally, the data allow an examination of the relationship between turnover rates, wage rates and the size of establishment. The value of the coefficient of rank correlation between turnover and wage rates is – 0.72. Turnover rates and average size are also negatively related: the value of the coefficient was – 0.77. Conversely, wage rates and average size are directly related. The value of the coefficient is 0.70. All coefficients are significant at the one per cent level.[27]

In attempting to use turnover rates and wage rates as criteria in deciding whether government should support training programmes in particular establishments, the foregoing analysis suggests that these two criteria are in conflict with one another. Using wage rates as a measure of the productivity of the firms and turnover rates as a measure of the

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25 Each of these coefficients is significant at the one per cent level. The number of industries involved in each of the calculations varies because Statistics Canada data on turnover and wage rates were not available for all industries included in the survey.

26 The number of industries involved in each of these calculations is the same as in the previous calculations. The inclusion of apprentices in calculating the percentage of employees in training does not affect the results of the calculations.

27 In calculating the value of the coefficient, the number of industries was as follows: between turnover and wage rates, twenty-five; between turnover rates and average size, twenty-six, between wage rates and size, thirty-one.

extent to which the benefits of training were distributed throughout the economy, it was observed that these two criteria vary inversely. If firms with high wage rates were selected to receive government subsidies, these firms could be expected to experience low turnover rates, which would presumably enable them to retain most of their trainees. Thus, the firm would be in a better position to capture the benefits of government subsidies than firms with lower wage rates. The survey data indicate that industries with high wage rates are more likely to have a formal training programme than industries paying low wages. Moreover, high wages may suggest that firms already have the means to finance their training programmes without public assistance. To the extent that they reflect the ability of firms to satisfy their training needs, government assistance may not be warranted. Finally, since high wages are associated with large establishments that tend to have employees to organize training programmes, financial assistance by government to these establishments may simply finance programmes which would have been undertaken in the absence of such assistance. Thus government support of training in high-wage industries may result in less net additional training than a policy of providing subsidies to lower-wage industries. In any case, the presence of full-time personnel to organize training programmes in large establishments suggests that they are in a better position than smaller ones to meet their training requirements; the smaller establishments may, therefore, be in greater need of assistance in introducing training programmes than the large firms.

If turnover rates are used as a criterion in selecting firms for government assistance, the type of firm receiving public subsidies may be radically different from what it would be if wage rates were used as a criterion. Since turnover rates are inversely related to wage rates and the size of establishment, the use of turnover rates as a selection criterion would probably lead to the channelling of public assistance to low-wage and smaller firms. The selection of smaller firms may be desirable since they are less likely to have full-time personnel available to organize training programmes. Their need for assistance (technical as well as financial) may also be greater because their size may prevent them from benefitting from economies of scale. Further, releasing employees from their normal work may be a greater burden to small firms than to larger ones since the former may be less flexible in assigning the trainee's work duties to other employees. The association between high turnover rates and low wages, however, creates a conflict. If high turnover rates reflect a greater probability that trainees will move and benefit firms other than the sponsoring firm, low wages suggest that government assistance would be directed to less efficient or less productive firms.

These conflicts between the criteria suggest that the selection of firms for public assistance in training would depend on the goals or objectives of government-sponsored training programmes. These goals can be grouped in two broad categories: economic growth and income redistribution. If economic growth were to be the main objective, public funds would be directed toward firms in which the rate of return to investments in training would be highest. High-wage or low-wage firms could be selected provided that the investment in training yielded the highest rates of return. If income redistribution were chosen as the main objective, firms would be selected so as to assist workers earning low wages in raising their incomes.

Whatever the objectives of government-sponsored training programmes, the preceding discussion indicates that additional criteria may be useful in selecting firms which would receive public training assistance. In addition to the capacity of the firm to provide the training, the content of the training programme may serve as a guide in selecting firms. An examination of training curriculum may shed some light on the extent to which a training programme provides specific or general training, i.e., whether it is likely to benefit the sponsoring firm only, a small group of firms or a large group. This information, in conjunction with data on the need for the skills taught in the programme, may provide guides to the role of government in subsidizing particular training programmes.

Finally, it should be noted that public support of private training programmes can take a variety of forms. While financial assistance is a common and easily identifiable form of public support, other services, such as technical assistance in selecting training methods and trainees, and in designing training curricula may contribute significantly to the successful implementation of training programmes. The survey data indicate that only a small proportion of firms in the smaller size categories have full-time personnel in charge of training. The need for technical assistance may, therefore, be greatest among the smaller firms.

SUMMARY AND CONCLUSIONS

Since private employers have traditionally been the main suppliers of specific skills, government has turned to industry as one agent to carry out its training objectives. Government participation in training in industry programmes has generated a need to develop criteria for selecting the types of training it should support and the firms in which this training should be encouraged. The purpose of the survey of industry-sponsored training programmes in Ontario was to collect information on the volume and types of training supplied by private employers in the Province.

During the twelve-month period ending July 31, 1969, 21.8 per cent of the 6,942 establishments responding to the Ontario survey of industry-sponsored training programmes provided formal training to their employees. Apprenticeship was the most common type of training, with 12.7 per cent of the establishments reporting that type of training. Only 5.4 per cent provided short-term training and an additional 3.7 per cent reported both apprenticeship and short-term formal training. In terms of numbers of trainees, however, short-term training was more important than apprenticeship. While 10.4 per cent of all employees reported in the survey were enrolled in a formal training programme during the twelve-month period, only 0.8 per cent were apprentices; 2.7 per cent were enrolled in orientation and safety programmes and 6.9 per cent in other types of short-term training.

Of the establishments with formal training programmes, 14.0 per cent reported one or more training officers whose full-time job was to organize and direct formal training. This proportion was highest in the mining and finance industries. Also, the proportion of establishments with a full-time training officer increased directly with size of establishment; it was over fifty per cent among establishments with 1,000 or more employees.

External hiring was more common than internal recruitment in filling job vacancies. Establishments usually hired workers from outside the establishment and did not provide them with formal training; whatever training took place was informal. The second most common method of filling vacancies was to place workers employed in the establishment in a different job, again without providing formal training. Transferring workers to a different job and training them formally was the third method; providing formal training to recently hired workers ranked last. There were few variations from this pattern in the various occupations, industries and size of establishment categories.

Overall, 9.1 per cent of the establishments reported short-term training programmes. The finance industry reported the highest proportion of establishments with a training programme and was followed by the mining and transportation industries; the service industry ranked last. The proportion of establishments reporting formal training programmes increased directly with establishment size.

As noted earlier, 6.9 per cent of the 951,000 workers covered by the survey were enrolled in short-term training programmes (excluding safety and orientation) during the twelve-month reference period. This proportion was highest in the transportation and finance industries; the service industry ranked last. Training was most extensive in establishments with one thousand or more employees. While 14.8 per cent of the employees in these establishments were enrolled in a training programme, the proportion ranged between 1.3 per cent and 2.4 per cent in smaller establishments.

Safety and orientation training accounted for over one-fourth of all trainees. This proportion was highest in the manufacturing, mining and trade industries (43.1 per cent, 42.6 per cent and 35.3 per cent respectively). Supervisory, clerical and trade training each accounted for approximately ten per cent of the trainees. The transportation industry emphasized training in trade or craft skills, while the trade industry was involved most heavily in merchandising and sales training. Clerical training accounted for almost half of the trainees in the finance industry. Training in trade or craft skills and in machine operation and control was substantial in the mining industry, while in the service industry, trainees were distributed more evenly between several types of training.

When compared to the distribution of trainees, the distribution of the courses sponsored by industry suggests that certain courses (e.g., those in safety and orientation) are directed toward a large number of trainees, while other (e.g., those in managerial and executive training) are aimed at smaller groups.

Most of the short-term trainees (over two-thirds) were enrolled in courses lasting less than one month. The shortest courses were in programming, computer training and numerical control, personal services, safety and orientation. Courses were longest in academic upgrading programmes, which accounted for only a small proportion of all trainees.

Approximately two-thirds of all trainees (excluding those in safety and orientation programmes) worked in white collar occupations after completing their courses. The largest groups were supervisors and

foremen, sales and clerical workers. Supervisors and foremen were the largest single group in the manufacturing industry. In the finance industry, more than half of the trainees were clerical workers and over three-fifths of those in the trade industry were in sales occupations. Craftsmen and production process workers were the largest group in the transportation industry. Two-thirds of the trainees in the mining industry were miners, quarrymen and related workers.

An examination of the characteristics of firms which provide formal training and of some criteria which could be used to select firms in which training should be supported by government shows that the criteria may be in conflict with one another. Using wage rates as a measure of productivity and turnover rates as an indicator of the extent to which the benefits of training are distributed through the economy, it was observed that these two criteria varied inversely: high turnover rates are associated with low wage rates. Firms with high wage rates experience low turnover rates; they are more likely to have a formal training programme and tend to be larger than firms paying low wages. Large firms, in turn, are more likely to have at least one person working full-time to organize formal training programmes. Large, high-wage firms therefore appear to be in a better position to meet their own training needs than the smaller ones.

Conversely, low-wage firms experience high turnover rates. They are less likely to have an official responsible for training or to have a formal training programme. While these characteristics indicate that low-wage firms may require more training assistance than high-wage firms, their wage rates suggest that government support would be directed toward firms with low productivity.

If economic efficiency is the main goal of government policy, government support of training in small, low-wage industries would have to yield a rate of return equal to that obtained from the same investment in high-wage firms. If income redistribution is the goal of government-supported training programmes, the potential income of the trainee would be a major criterion in selecting training firms. A conflict between the goals of economic efficiency and income redistribution would arise if training low wage earners yielded a lower rate of return to investment than training high wage earners.

As to the types of training which government should support, the data derived from the survey provide only part of the information required to determine the role of government. However, these data, used in conjunction with other information (e.g., job vacancies, occupational projections, wage rates, curriculum analysis and institutional training activities), would allow an assessment of the broad areas to which government assistance should be directed.

APPENDIX A

COMPARISON OF RESPONDENT WITH NON-RESPONDENTS

In order to determine whether establishments which did not respond to the survey of industry-sponsored training programmes differed from those which did, a random sample of non-respondents was selected. Each establishment was requested (by telephone) to state the number of workers it employed. Since Canadian and United States surveys have shown that training is directly related to the size of establishments, employment data on non-respondents provides one indication of possible differences between respondents and non-respondents.

The data in Table A show the distribution of respondents and of a sample of non-respondents by size of establishment in each industry covered by the survey.[28] They indicate that establishments which did not respond to the survey were larger than those which did. Thus, 51.2 per cent of the respondents, but only 43.2 per cent of the non-respondents, employed fifteen to forty-nine workers. Among establishments with one hundred or more employees, the proportion of non-respondents was larger than the proportion of respondents.

In the transportation and manufacturing industries, non-respondents had fewer establishments in the fifteen to forty-nine category than did respondents. In the manufacturing industry, this difference was largely

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[28] Because of differences in the number of establishments in each industry, the proportion of non-respondents in the sample varies between industries; it is highest in industries with the smallest numbers of establishments. In the mining industry, 60.5 per cent of the non-respondents were contacted; in the manufacturing industry, 8.6 per cent; in the transportation industry, 34.5 per cent; in the trade industry, 7.7 per cent; in the finance industry 8.6 per cent; and in the service industry 10.4 per cent. These percentages underestimate the proportion of non-responding establishments which were contacted because the number of non-respondents was determined by subtracting the number of respondents from the total number of establishments on the survey list. The number of non-respondents therefore includes establishments which did not return a questionnaire but for which data was provided by other establishments such as a head office or parent company.

offset by establishments with fifty to ninety-nine employees, while in the transportation industry, establishments with 250 to 499 employees accounted for most of the difference.

In the trade industry, the proportion of establishments in the larger size categories (those with one hundred or more employees) is greater among non-respondents than among respondents. However, more than three-fifths of the establishments employed fifteen to forty-nine employees and the percentages among respondents and non-respondents are similar (65.2 per cent and 61.5 per cent, respectively).

The main difference in distributions in the finance industry appears among establishments with 100 to 249 employees where the proportion of non-respondents (33.3 per cent) is greater than that of respondents (19.7 per cent). Conversely, the proportion of respondents in the smaller size categories (those with less than one hundred employees) is larger than that of non-respondents.

In the mining industry, non-respondents reported a larger proportion of establishments with one thousand or more employees than did respondents (14.3 per cent and 2.0 per cent respectively). The respondents were proportionally more numerous in the 15 to 49 and 250 to 499 categories.

Differences between distributions in the service industry were negligible.

Since previous surveys, as well as the Ontario survey, have indicated that the proportion of establishments with formal training programmes increases directly with the size of the establishments, the greater proportion of non-respondents than of respondents in the large size categories suggests that the results of this survey under-estimate the volume of formal training sponsored by industry in Ontario. However, given the high response rate of the survey, the findings reported in this study should reflect patterns which prevail in industry generally.

Table A

Percentage Distribution of Respondents and Non-Respondents to the Survey of Industry-Sponsored Training Programmes in Ontario, by Size of Establishment and Industry, 1969

Size of Establishment (Employees)	Industry													
	Total		Mines, Quarries and Oil Wells		Manufacturing		Transportation, Communication and Other Utilities		Trade		Finance, Insurance and Real Estate		Community, Business and Personal Services	
	Respondents	Non-Respondents	Respondents	Non-Respondents	Respondents	Non-Respondents	Respondents	Non-Respondents	Respondents	Non-Respondents	Respondents	Non-Respondents	Respondents	Non-Respondents
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
15-49	51.2	43.2	37.0	28.6	41.1	27.9	55.4	40.3	65.2	61.5	35.4	24.2	61.2	61.5
50-99	22.0	21.9	13.0	14.3	24.6	32.5	22.7	26.4	20.6	14.1	21.1	15.2	18.3	15.4
100-249	16.5	18.1	19.0	23.8	21.4	21.6	12.9	15.3	10.7	12.8	19.7	33.3	12.3	12.8
250-499	5.8	9.4	19.0	9.5	7.6	9.0	5.5	15.3	2.1	7.7	11.7	15.1	3.6	3.8
500-999	2.6	4.6	10.0	9.5	3.5	8.1	1.4	2.7	0.7	1.3	5.8	6.1	1.9	2.6
1,000 and Over	1.9	2.8	2.0	14.3	1.8	0.9	2.1	–	0.7	2.6	6.3	6.1	2.7	3.9

– no observation

APPENDIX B

SUPPLEMENTARY TABLES

Table B-1

Percentage Distribution of Short-Term Courses, by Type of Training and Size of Establishment, Ontario, August 1, 1968 – July 31, 1969

Type of Training	Size of Establishment (Employees)						
	Total	15-49	50-99	100-249	250-499	500-999	1,000 and over
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Administrative or Executive	15.0	15.0	18.3	13.1	11.5	13.2	17.0
Technician or Technologist	5.6	3.3	6.4	7.0	6.0	5.7	5.4
Supervisory	14.4	13.9	12.7	14.1	15.7	12.3	17.9
Industrial or Business Processes	4.1	3.3	3.7	4.2	7.2	4.7	3.1
Clerical (Includes Office Machine Operators)	11.0	12.5	10.8	11.8	8.4	9.4	10.7
Trade or Craft Skills	9.9	12.1	10.8	9.0	10.9	7.5	7.6
Programming, Computer Training or Numerical Control	4.2	1.5	3.0	4.5	4.2	8.5	6.7
Machine Operation and Control	3.9	2.2	4.9	3.8	5.4	6.6	2.2
Academic Upgrading	3.2	1.5	1.9	5.1	3.6	5.7	2.7
Merchandising or Sales	9.7	13.5	13.8	8.6	4.2	4.7	8.0
Personal Services	0.8	1.8	–	0.3	0.6	1.9	0.9
Safety	5.0	4.0	3.7	5.8	6.6	9.4	3.1
Orientation	4.5	4.0	3.7	3.8	5.4	4.7	6.2
Other	8.7	11.4	6.3	8.9	10.3	5.7	8.5

Table B-2

Percentage Distribution of Apprentices, by Trade and Industry, Ontario, August 1, 1968 – July 31, 1969

Trade	Industry					
	Total	Mines, Quarries and Oil Wells	Manufacturing	Transportation, Communication and Other Utilities	Trade	Community, Business and Personal Services
Total	100.0	100.0	100.0	100.0	100.0	100.0
Carpenter	0.6	--	0.6	..	0.5	2.2
Electrician	8.3	27.8	6.9	16.3	4.9	1.2
Iron Worker	0.7	--	1.1	..	1.0	--
Lineman	5.9	--	..	30.8	..	--
Plumber and Steamfitter	1.9	1.2	2.2	1.7	2.5	..
Sheet Metal Worker	1.4	--	1.9	0.6	1.7	..
Machinist	8.1	2.4	13.0	4.1	4.3	..
Tool and Die Maker	6.9	--	13.5	--	..	..
Maintenance Machinist and Mechanic	6.7	7.1	7.1	2.3	15.2	--
Plant Maintenance	6.1	4.3	5.1	16.2	2.2	..
Automotive Maintenance and Repair	10.6	3.9	1.5	6.6	52.4	2.4
Printer	8.0	--	15.7	--	..	..
Draftsman	2.0	--	2.8	1.5	0.5	1.9
Other	32.8	53.3	28.2	19.7	14.0	90.9

.. Less than 0.5 per cent. Columns do not add to 100.0 per cent when observation of less than 0.5 per cent are excluded.

-- no observation

Table B-3

Percentage Distribution of Apprentices, by Trade and Size of Establishment, Ontario, August 1, 1968 – July 31, 1969

Trade	Size of Establishment (Employees)						
	Total	15-49	50-99	100-249	250-499	500-999	1,000 and over
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Carpenter	0.6	2.4	0.6	0.4	--	0.8	0.1
Electrician	8.0	1.0	1.1	3.0	8.1	9.4	18.0
Iron Worker	0.7	0.8	3.0	0.2	0.1	0.7	0.2
Lineman	5.9	1.6	5.9	4.8	3.1	--	12.7
Plumber and Steamfitter	1.5	0.1	0.1	0.2	0.2	3.3	3.8
Sheet Metal Worker	1.4	2.1	3.0	2.0	0.7	0.9	0.3
Machinist	8.0	4.5	6.0	12.7	3.9	17.1	6.7
Tool and Die Maker	6.9	6.1	10.9	5.4	6.5	4.2	7.5
Maintenance Machinist and Mechanic	6.8	8.1	7.4	5.9	7.0	4.0	7.2
Automotive Maintenance and Repair	10.7	24.7	24.2	10.1	2.9	1.6	3.8
Plant Maintenance	6.2	0.5	1.2	4.2	5.8	3.5	14.1
Printer	8.1	7.5	16.1	12.3	6.8	8.7	2.5
Draftsman	2.0	1.5	1.6	2.4	2.8	0.4	2.5
Other	33.2	39.1	18.9	36.4	52.1	45.4	20.6

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ONTARIO

DEPARTMENT OF LABOUR

SURVEY OF INDUSTRY-SPONSORED TRAINING PROGRAMMES IN ONTARIO

INTRODUCTION

It is important that this questionnaire be answered and returned regardless of whether your establishment provided or sponsored formal training at any time during the survey period (August 1, 1968 to July 31, 1969). Questions refer to all types of training and to employees in all occupations. The information you supply will assist labour, management and government in determining their role in training workers. All replies will be held in strict confidence and no statistics which would allow the identification of individual establishments will be released. If you are unable to provide parts of the information requested, please supply all available information.

OUTLINE OF QUESTIONNAIRE

This questionnaire consists of seven questions. The first two should be answered by all establishments whether or not they had formal training programmes during the survey period. Questions 3 and 4 seek detailed information on the types of formal training received by employees in specified occupational groups and on the duration of courses. Questions 5 to 7 involve simply placing a check mark beside answers regarding training arrangements in your establishment or company.

Regardless of whether your establishment provided formal training between August 1, 1968 and July 31, 1969, please supply the information requested below and answer questions 1 and 2.

NAME OF ESTABLISHMENT: _____

_____

MAILING ADDRESS: _____

_____

PERSON ANSWERING THIS QUESTIONNAIRE:

NAME: _____

POSITION: _____

PHONE NUMBER: _____

Will your replies refer only to employees in the establishment named above? YES ☐ NO ☐

If no, please list or identify (below) additional establishments included in your replies (hereafter, the expression "establishment" refers to all establishments listed):

1. NAME: _____

   ADDRESS: _____

2. NAME: _____

   ADDRESS: _____

3. NAME: _____

   ADDRESS: _____

(use additional sheets if necessary)

PLEASE READ CAREFULLY THE FOLLOWING DEFINITIONS BEFORE ANSWERING QUESTIONS 1 AND 2.

DEFINITIONS

Formal Training, as used in the questionnaire, means any pre-arranged and structured system of instruction sponsored or utilized by your establishment, to qualify any of your employees to perform, or to improve their skills in performing, their job duties. The training may be of any length and may involve any number of your full- or part-time employees.

Included in this definition of formal training are 'on-the-job', 'classroom', apprenticeship, safety and orientation training. These are defined below:

- 'on-the-job' training is a structured system of instruction offered in a production or work environment;

- 'classroom' training is a structured system of instruction provided in a 'non-production' environment either in a room on the premises of the establishment, but away from the normal work or production area, or in an institution such as an academic, technical or vocational school or an university. Training in institutions should be reported if the establishment sponsors such training by granting employees time off to attend courses or by paying at least part of the employee's training costs;

- apprenticeship is a form of organized training leading to journeyman status, which involves a written or oral contractual agreement between employer and employee regardless of whether the apprenticeship is registered with the Department of Labour;

- safety training develops the worker's ability to use safe work techniques and practices;

- orientation training is usually provided to new workers to acquaint them with the company's background, rules and procedures. As with safety, it does not provide employees with new skills or develop their skills through up-grading, but helps them use existing skills in a particular work or production environment.

Excluded from the scope of this survey are all types of "informal training". This term refers to the process in which employees 'pick up' the knowledge needed to perform a job by working under normal work or production conditions either with an experienced worker or under the direction of a supervisor or foreman. Informal training differs from formal training in that it does not involve a prearranged and structured system of instruction.

Reference period: Information is requested on formal training received by employees at any time between August 1, 1968 and July 31, 1969. Thus, employees who started their courses before August 1, 1968 or were scheduled to complete them after July 31, 1969 should be included if at least part of their training was taken during the survey year. Furthermore, employees who received formal training and subsequently left your establishment should be included in your replies.

DEFINITIONS OF OCCUPATIONAL TITLES

USED IN THIS QUESTIONNAIRE

Managerial, Executive: A term applied to employees who direct supervisory personnel to attain operational goals of an organization or department as established by management.

Professional: Includes occupations concerned with the theoretical or practical aspects of such fields of human endeavour as art, science, engineering, education, medicine, law business relations, and administrative, managerial and technical work.

Technical: A term applied to an employee who works in direct support of Engineers or Scientists, utilizing theoretical knowledge of fundamental scientific, engineering, mathematical or draft design principles.

Supervisor (including Foreman): Includes occupations concerned with supervising groups of workers, interpreting specifications or other written or verbal instructions, determining procedures of work, assigning duties and inspecting for quality and quantity. They may also hire, train and discharge workers, and keep records. They may assist subordinates particularly in setting up, inspecting and programming work or procedures. They are chiefly identified by their responsibility for the performance of other workers and usually require a knowledge of the management and operations of an organization, rather than a scientific, technical, or administrative specialty.

Clerical: Includes occupations concerned with preparing, transcribing, transferring, systematizing and preserving written communications and records; collecting accounts; distributing information.

Office Appliance Operators: Includes occupations concerned with the operation of office equipment related to accounting, addressing, billing, bookkeeping, calculating, card punching, sorting, collating and verifying, duplicating, mailing and similar operations.

Sales occupations: Includes occupations concerned with influencing customers in favour of a commodity or service (including occupations closely identified with sales transactions even though they do not involve actual participation).

Service occupations: Includes occupations concerned with performing tasks in and around private households, serving individuals in institutions and in commercial and other establishments, and protecting the public against crime, fire, accidents, and acts of war.

Transportation occupations: Includes occupations concerned with moving people or materials by means of automotive and railway vehicles, aircraft, freshwater or seagoing vessels, pipes and pumps. Includes loading bulk materials into conveyances; ascertaining number of passengers and amount and kind of materials being conveyed, directing course of carrier; routing materials; servicing carriers; and related activities.

Communications occupations: Includes occupations concerned with receiving and transmitting communications, using wire or high frequency transmission; recording, transcribing, and reproducing all sounds; occupations not elsewhere classified, concerned with furnishing aural or visual point-to point communications.

Loggers and related workers: Includes occupations concerned with cutting trees in forest areas; installing overhead and groundlevel log moving equipment; evaluation and removal of logs from forest to storage or transportation areas; and related activities, involving operation of chain saws and log-moving machinery and equipment, and such devices as hooks, slings and poles for manually securing or moving logs.

Miners, quarrymen and related workers: Includes occupations concerned with quarrying and with the extraction of minerals, such as coal, ores, crude petroleum, and natural gas. Includes crushing, screening, washing, flotation, and other processes of extracting materials at or near the mining site.

Craftsmen (Production and Maintenance): Includes occupations concerned with fabricating, erecting, installing, paving, painting, repairing and regularly working structures or structural parts such as bridges, buildings, roads, motor vehicles, cables, airplane engines, girders, plates and frames. Tools used are hand or portable power tools, and such materials as wood, metal, concrete, glass and clay are involved. Workers are frequently required to have a knowledge of the material with which they work, e.g. stresses, strains, durability, and resistance to weather. At the more complex levels, the important aspects of the work include understanding machine functions, reading blueprints, making mathematical computations, and exercising judgement to attain conformance to specifications. Set-up, disassembly, repair, reassembly, installation, and maintenance of machines and mechanical equipment are included in this category.

Operators: Includes occupations which involve the routine machine processing of materials such as punch press or stamping machine operation.

Production process workers: Includes occupations involving the repetitive performance of a limited number of tasks requiring little technical skill.

Labourers: A term applied to workers with little or no skill.

Others: All others not previously mentioned.

Question 1. In column 1 please enter the total number of employees in each occupational group as of July 31, 1969. For each occupational group, please rank, in descending order of numerical importance, the sources identified in columns 2 to 5, from which employees entered their current job between August 1, 1968 and July 31, 1969. (Use rank of 1 for the most important and a rank of 4 for the least important; see example below and definitions of occupational groups on the opposite page.)

Current occupation of employees	Total Employees as of July 31, 1969	Source of employees			
		outside the establishment and formally trained by you for their current job	outside the establishment with no formal training required by you for their current job	within the establishment and formally trained by you for their current job	within the establishment with no formal training required by you for their current job
	16 - 20	21	22	23	24
TOTAL					
Managerial, executive 01					
Professional 02					
Technical 03					
Supervisor (incl. Foreman) 04					
Clerical occupations 05					
Office appliances operators 06					
Sales occupations 07					
Service occupations 08					
Transportation occupations 09					
Communications occupations 10					
Loggers and related workers 11					
Miners, quarrymen & related workers 12					
Craftsmen (production & maintenance) 13					
Operators 14					
Production process workers 15					
Labourers 16					
Other (please specify) 17					
....					
....					

Example: Assume that, during the survey year, operators were drawn from two sources. If the largest number of them were employees in other occupations in your establishment who received formal training from you to become operators, a "1" should be entered in column 4 of line 15. If the second source consisted of operators hired from outside your establishment and not requiring formal training, a "2" would be entered in column 3 of line 15 and an "0" in columns 2 and 5.

Question 2. In column 1, please enter the number of journeymen in each trade as of July 31, 1969. In column 2, enter the total number of apprentices in training at any time between August 1, 1968 and July 31, 1969. In the remaining columns, check (✓) the total length of your apprenticeship programmes regardless of the length already completed by your apprentices.

Trade	No. of journeymen as of July 31/69	Total No. of apprentices in training Aug. 1/68 to July 31/69	Total length of apprenticeship				
			Less than 1 yr.	1 yr. but less than 2 yrs.	2 yrs. but less than 3 yrs.	3 yrs. but less than 4 yrs.	4 yrs. or more
	16 - 20	21 - 25	26	27	28	29	30
TMM							
Structural Trades							
Air Conditioning & Refrigeration Worker 01							
Mason (any type) 02							
Carpenter 03							
Electrician 04							
Ironworker 05							
Lineman 06							
Painter & Decorator 07							
Plumber & Steamfitter 08							
Sheet Metal Worker 09							
Other (please specify) 10							
.....							
Machine Trades							
Machinist 11							
Pattern Maker 12							
Tool & Die Maker 13							
Woodworking Machinist 14							
Other (please specify) 15							
.....							
Maintenance Trades							
Machinist & Mechanic 16							
Automotive Maintenance & Repair 17							
Plant Maintenance 18							
Small Engine Mechanic 19							
Other (please specify) 20							
.....							
Service Trades							
Barber & Hairdresser 21							
Chef 22							
Printer 23							
Retail Meat Cutter 24							
Draftsman 25							
Other (please specify) 26							
.....							

If none of your employees received formal training (as defined above) at any time between August 1, 1968 and July 31, 1969, please ignore questions 3 to 7 and return this questionnaire in the enclosed envelope.

If any of your employees received formal training (as defined above) at any time between August 1, 1968 and July 31, 1969, please answer questions 3 to 7 and return the questionnaire in the enclosed envelope.

INSTRUCTIONS FOR QUESTIONS 3, 4 AND 5

Questions 3, 4 and 5 refer to all employees enrolled in any formal training programme except apprenticeship. Employees who received more than one type of training should be counted for each type of training. Those who left your establishment after being trained at any time during the survey period should be included in your replies.

DEFINITIONS OF OCCUPATIONAL TITLES

USED IN THIS QUESTIONNAIRE

Managerial, Executive: A term applied to employees who direct supervisory personnel to attain operational goals of an organization or department as established by management.

Professional: Includes occupations concerned with the theoretical or practical aspects of such fields of human endeavour as art, science, engineering, education, medicine, law business relations, and administrative, managerial and technical work.

Technical: A term applied to an employee who works in direct support of Engineers or Scientists, utilizing theoretical knowledge of fundamental scientific, engineering, mathematical or draft design principles.

Supervisor (including Foreman): Includes occupations concerned with supervising groups of workers, interpreting specifications or other written or verbal instructions, determining procedures of work, assigning duties and inspecting for quality and quantity. They may also hire, train and discharge workers, and keep records. They may be subordinates particularly in setting up, inspecting and programming work or procedures. They are chiefly identified by their responsibility for the performance of other workers and usually require a knowledge of the management and operations of an organization, rather than a scientific, technical, or administrative specialty.

Clerical: Includes occupations concerned with preparing, transcribing, transferring, systematizing and preserving written communications and records; collecting accounts; distributing information.

Office Appliance Operators: Includes occupations concerned with the operation of office equipment related to accounting, addressing, billing, bookkeeping, calculating, card punching, sorting, collating and verifying, duplicating, mailing and similar operations.

Sales occupations: Includes occupations concerned with influencing customers in favour of a commodity or service (including occupations closely identified with sales transactions even though they do not involve actual participation).

Service occupations: Includes occupations concerned with performing tasks in and around private households, serving individuals in institutions and in commercial and other establishments, and protecting the public against crime, fire, accidents, and acts of war.

Transportation occupations: Includes occupations concerned with moving people or materials by means of automotive and railway vehicles, aircraft, freshwater or seagoing vessels, pipes and pumps. Includes loading bulk materials into conveyances; ascertaining number of passengers and amount and kind of materials being conveyed, directing course of carrier; routing materials; servicing carriers; and related activities.

Communications occupations: Includes occupations concerned with receiving and transmitting communications, using wire or high frequency transmission; recording, transcribing, and reproducing all sounds; occupations not elsewhere classified, concerned with furnishing aural or visual point-to-point communications.

Loggers and related workers: Includes occupations concerned with cutting trees in forest areas; installing overhead and groundlevel log moving equipment; evaluation and removal of logs from forest to storage or transportation areas; and related activities, involving operation of chain saws and log-moving machinery and equipment, and such devices as hooks, slings and poles for manually securing or moving logs.

Miners, quarrymen and related workers: Includes occupations concerned with quarrying and with the extraction of minerals, such as coal, ores, crude petroleum, and natural gas. Includes crushing, screening, washing, flotation, and other processes of extracting materials at or near the mining site.

Craftsmen (Production and Maintenance): Includes occupations concerned with fabricating, erecting, installing, paving, painting, repairing and similarly working structures or structural parts such as bridges, buildings, roads, motor vehicles, cables, airplane engines, girders, plates and frames. Tools used are hand or portable power tools, and such materials as wood, metal, concrete, glass and clay are involved. Workers are frequently required to have a knowledge of the materials with which they work, e.g. stresses, strains, durability, and resistance to weather. At the more complex levels, the important aspects of the work include understanding machine functions, reading blueprints, making mathematical computations, and exercising judgement to attain conformance to specifications. Set-up, disassembly, repair, reassembly, installation, and maintenance of machines and mechanical equipment are included in this category.

Operators: Includes occupations which involve the routine machine processing of materials such as punch press or stamping machine operation.

Production process workers: Includes occupations involving the repetitive performance of a limited number of tasks requiring little technical skill.

Labourers: A term applied to workers with little or no skill.

Others: All others not previously mentioned.

Question 3. Please enter the number of employees in each occupational group who, between August 1, 1968 and July 31, 1969, received the types of formal training shown below. (If employees were still in training on July 31, 1969, please classify them in the occupation for which they were being trained.)

☐☐☐☐☐☐☐☐☐☐

Type of Training	Total in Training	Occupation																
		Managerial, Executive	Professional	Technical	Supervisor (incl. Foreman)	Clerical occupations	Office Appliances Operators	Sales occupations	Service occupations	Transportation occupations	Communications occupations	Loggers & related workers	Miners, quarrymen & related workers	Craftsmen (Production & Maintenance)	Operators	Production Process Workers	Labourers	Other (please specify)
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18
TOTAL																		
Administrative & executive 01																		
Technician & technologist 02																		
Health, medical & hospital services* 03																		
Supervisory (incl. Foreman) 04																		
Industrial or business processes** 05																		
Clerical (excl. office machine operation) 06																		
Office machine operation 07																		
Trade or craft skills (mechanical, welding, etc.) 08																		
Programming, computer training, numerical control 09																		
Machine set-up 10																		
Machine operation & control (excl. numerical control) 11																		
Academic upgrading (math, physics, blueprint reading, etc.) 12																		
Merchandising or sales 13																		
Transportation & communication ..14																		
Community services 15																		
Personal services 16																		
Safety 17																		
Orientation 18																		
Other (please specify) 19																		
.....					/													

* Health, medical and hospital services: training people to help individuals who are totally or partially unable to care for themselves. This training prepares people for such jobs as hospital attendant or nurse's aide.

**Industrial or business processes: teaching the operations of businesses or industries, e.g. how the financial system operates or the various stages in the production of steel.

Question 4. Please enter the number of employees in training at any time between August 1, 1968 and July 31, 1969 and check (✓) the average length of courses in each type of training.

Type of Training	Total in training	Average Length of Course: Less than 2 wks.	2 wks. but less than 1 mo.	1 mo. but less than 3 mos.	3 mos. but less than 6 mos.	6 mos. but less than 1 yr.	1 yr. but less than 2 yrs.	More than 2 yrs.
	16 - 20	21	22	23	24	25	26	27
TOTAL								
Administrative or executive	11							
Technician or technologist	12							
Health, medical and hospital services*	13							
Supervisory (incl. Foreman)	14							
Industrial or business processes**	15							
Clerical (excl. office machine operation)	06							
Office machine operation	07							
Trade or craft skills (mechanical, welding, etc.)	08							
Programming, computer training or numerical control	09							
Machine set up	10							
Machine operation and control (excl. numerical control)	11							
Academic upgrading (physics, math, blueprint reading, etc.) ...	12							
Merchandising or sales	13							
Transportation and communication	14							
Community services	15							
Personal services	16							
Safety	17							
Orientation	18							
Other please specify	19							
.....								

* Health, medical and hospital: training people to help individuals who are totally or partially unable to care for themselves. This training prepares people for such jobs as hospital attendant or nurse's aide.

** Industrial or business processes: teaching the operations of businesses or industries, e.g. how the financial system operates or the various stages in the production of steel.

Question 5. In columns 1, 2 and 3, please enter the approximate proportion* of the total length of each type of training provided 'on-the-job' and in 'classrooms' (both within and outside your establishment). In columns 4 to 7, please indicate, with a check mark (✓), any of the specified ways in which you sponsored any formal training given outside your establishment. In column 8, please check (✓) each type of training in which at least part of the costs was met by direct payment to your establishment, from any level of government.

Type of Training	'On-the-job' training 10 - 18	'Classroom' instruction: within the establishment 19 - 21	'Classroom' instruction: outside the establishment 22 - 24	Given time off to attend course: with full pay 25	Given time off to attend course: without pay 26	Defray trainees' costs: fully 27	Defray trainees' costs: partly 28	Received government payment 29
Administrative or executive 01								
Technician or technologist 02								
Health, medical and hospital services 03								
Supervisory (incl. Foreman) 04								
Industrial or business processes 05								
Clerical (excl. office machine operation) 06								
Office machine operation 07								
Trade or craft skills (mechanical, welding, etc.) 08								
Programming, computer training or numerical control 09								
Machine set-up 10								
Machine operation and control (excl. numerical control) 11								
Academic upgrading (physics, math, blueprint reading, etc.) 12								
Merchandising or sales 13								
Transportation and communication 14								
Community services 15								
Personal services 16								
Safety 17								
Orientation 18								
Other (please specify) 19								
.....								

* If more than one course in a particular type of training was provided during the survey year, please give a rough average of the proportion of 'on-the-job' and 'classroom' instruction for those courses.

Question 6. Would your establishment's records allow you to determine the total costs incurred in providing the formal type(s) of training reported in previous questions?

YES .. ☐ NO .. ☐ 14

Question 7. Does your establishment have one or more persons whose full-time job is to organize and direct formal training programmes?

YES .. ☐ NO .. ☐ 15

If 'no', who is in charge of training?

Other official (excluding foreman or supervisor) assigned responsibility for training in addition to other duties ..... ☐ 16

Foreman or supervisor ..... ☐ 17

Training is handled by another establishment of the company ..... ☐ 18

Other (please specify) ..... ☐ 19

COMMENTS